

FIG. 1A

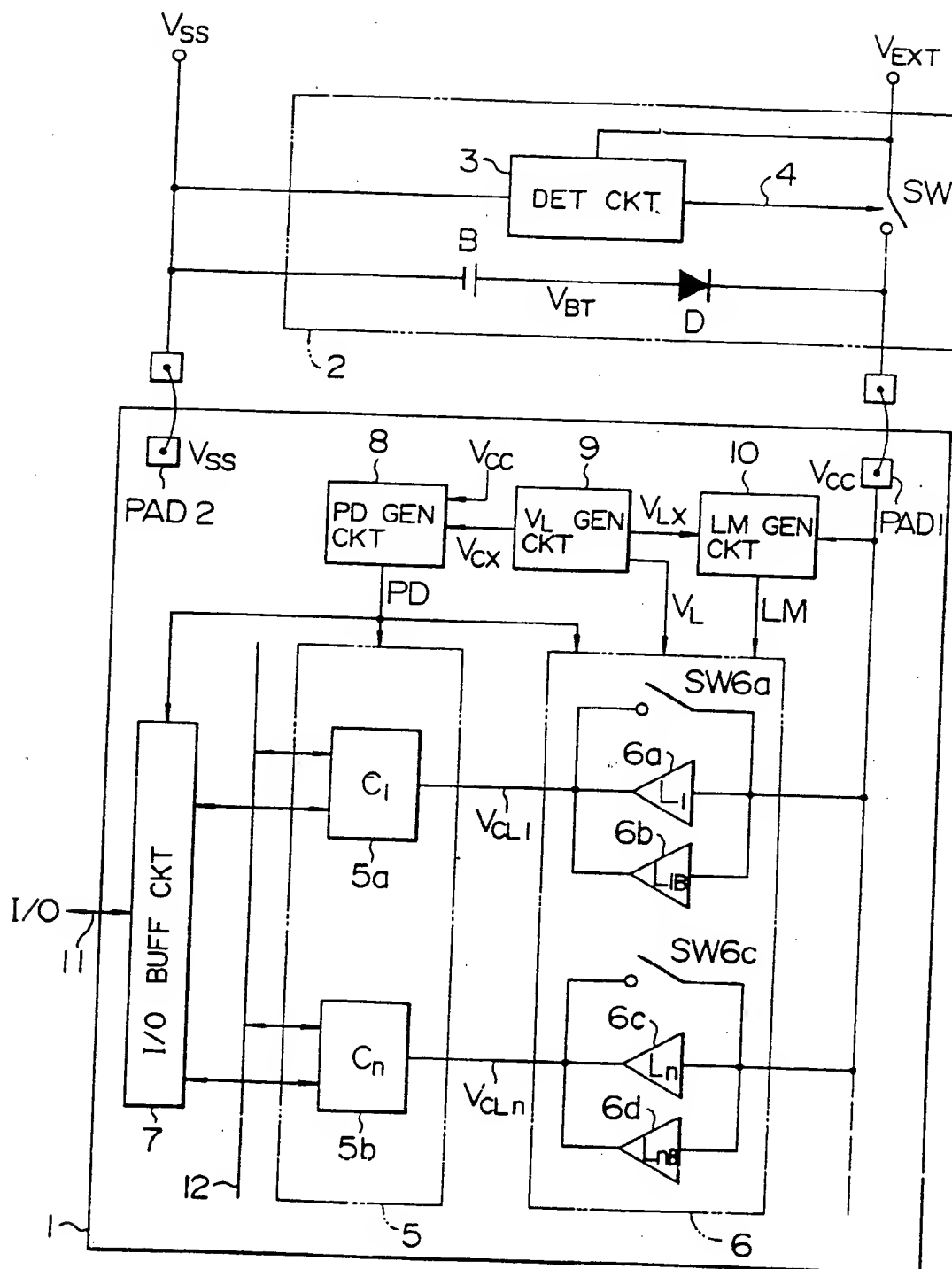


FIG. 1B

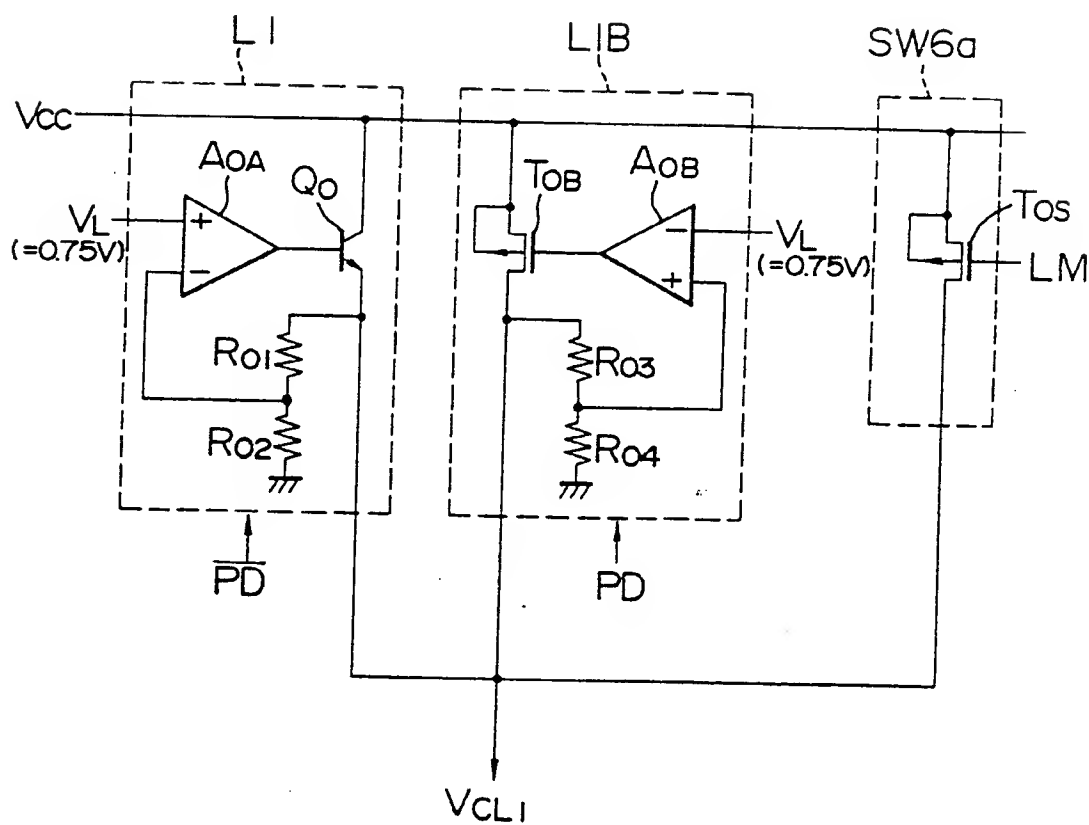


FIG. 1C

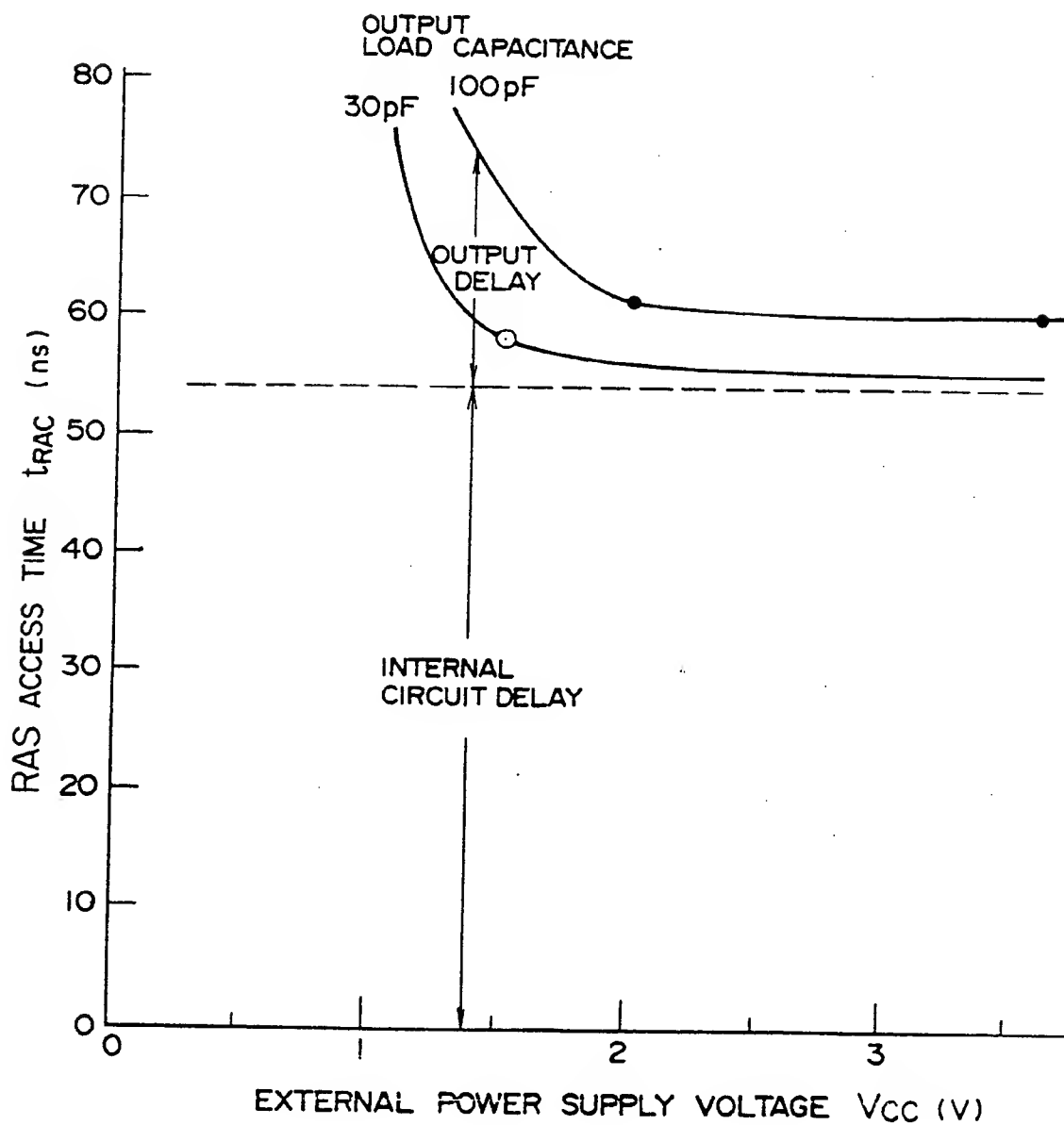


FIG. 2A

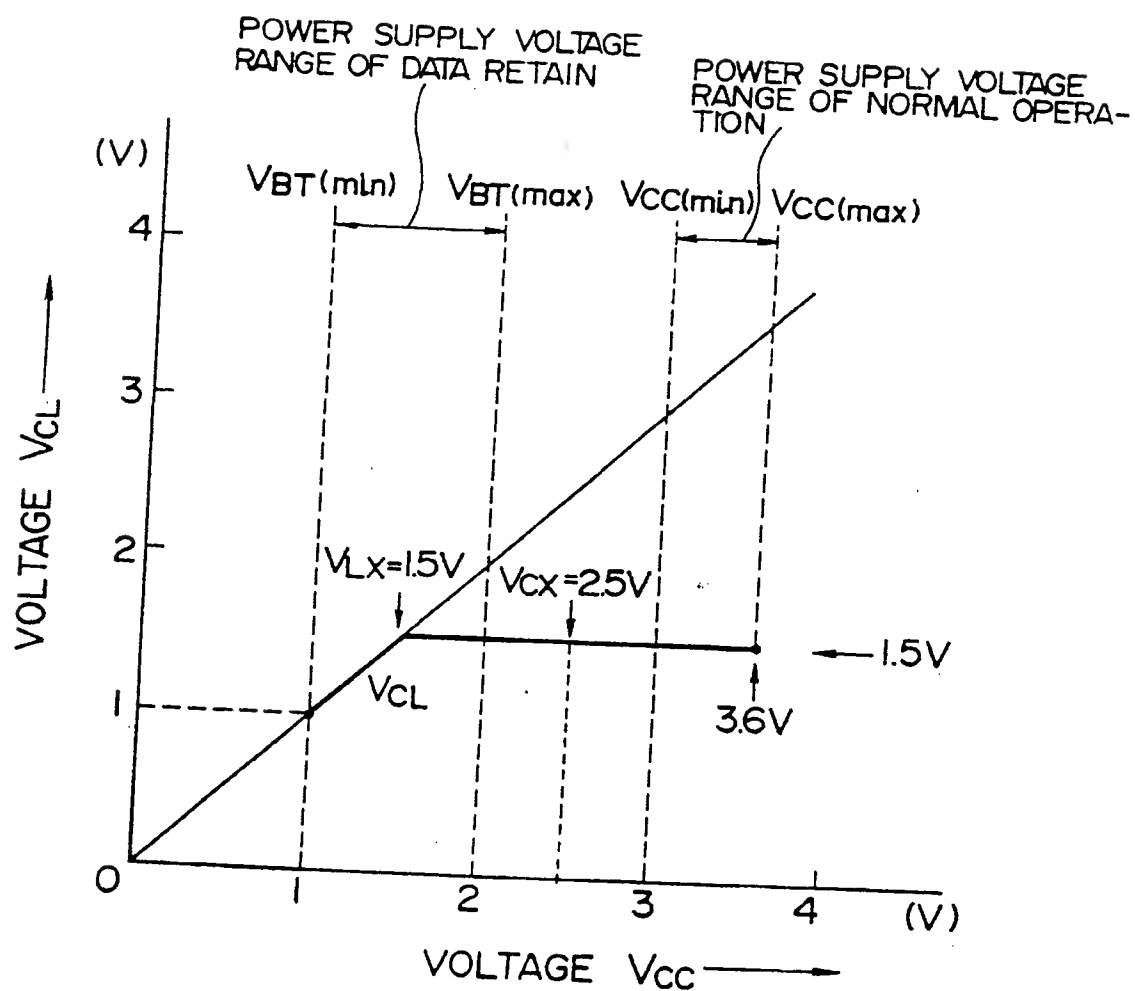


FIG. 2B

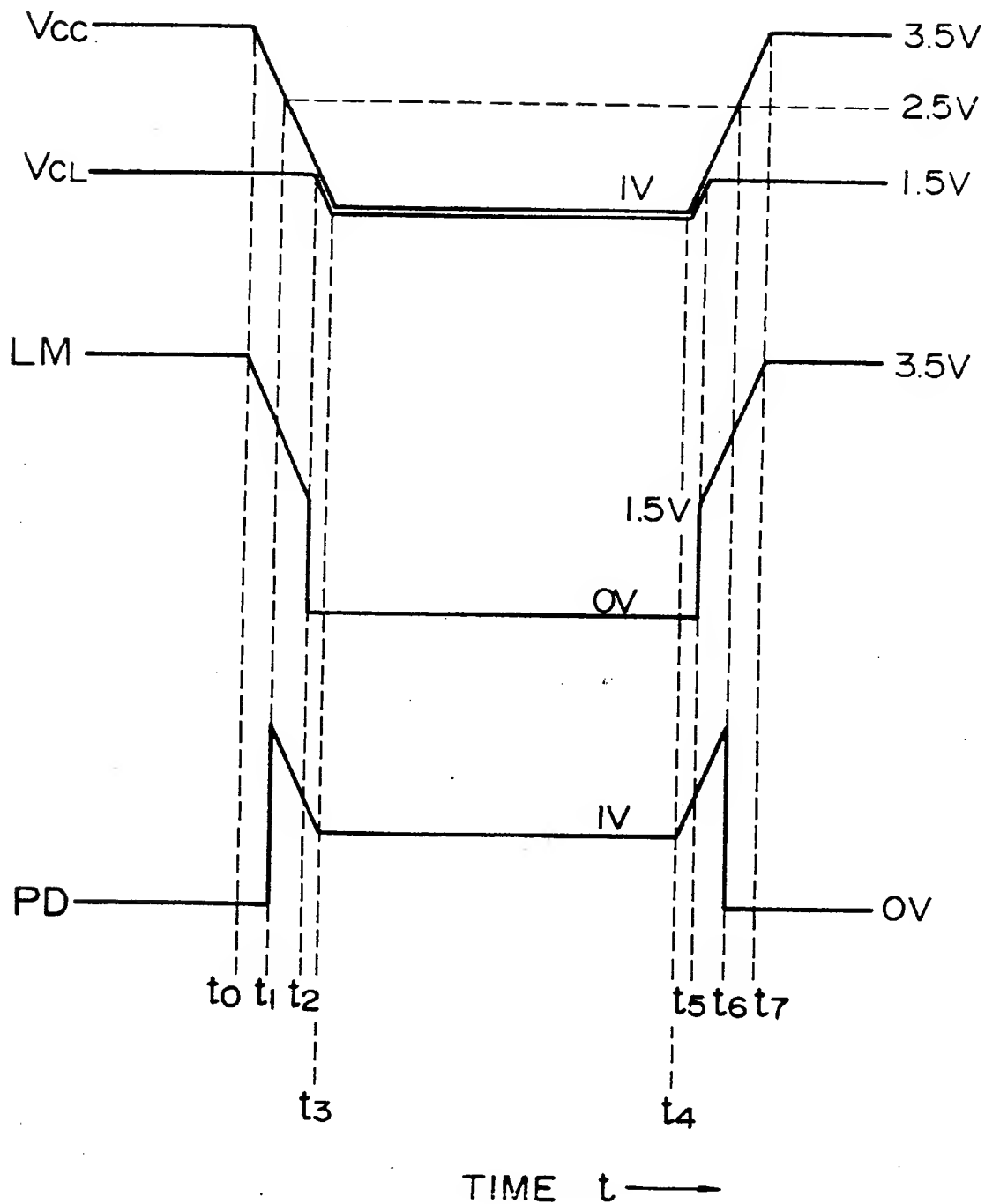


FIG. 2C

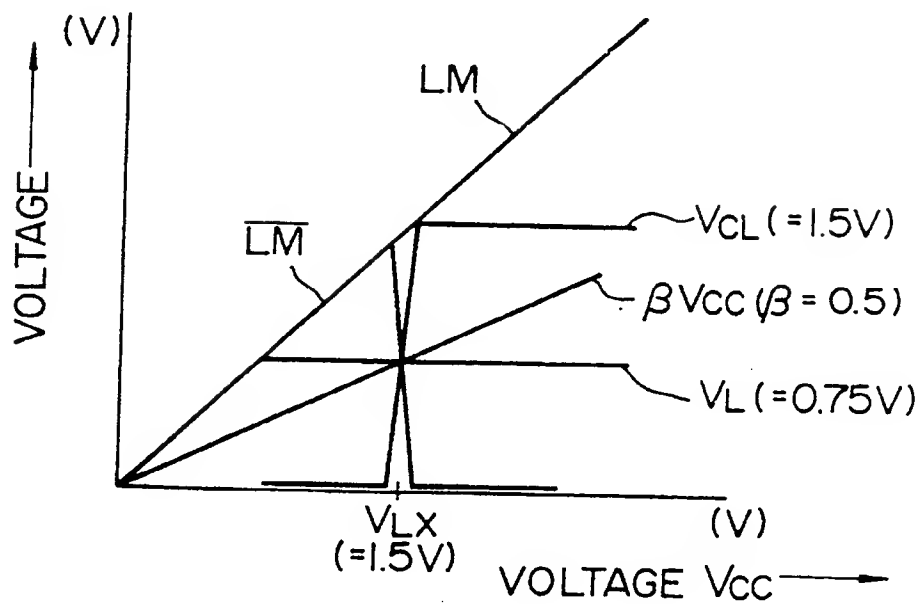


FIG. 2D

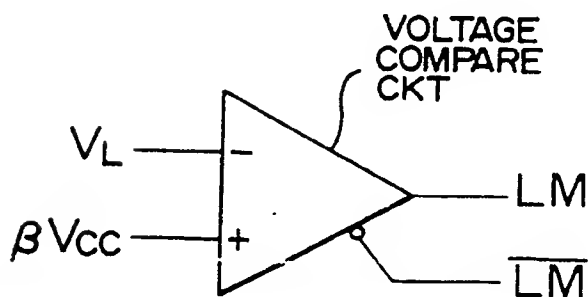


FIG. 2E

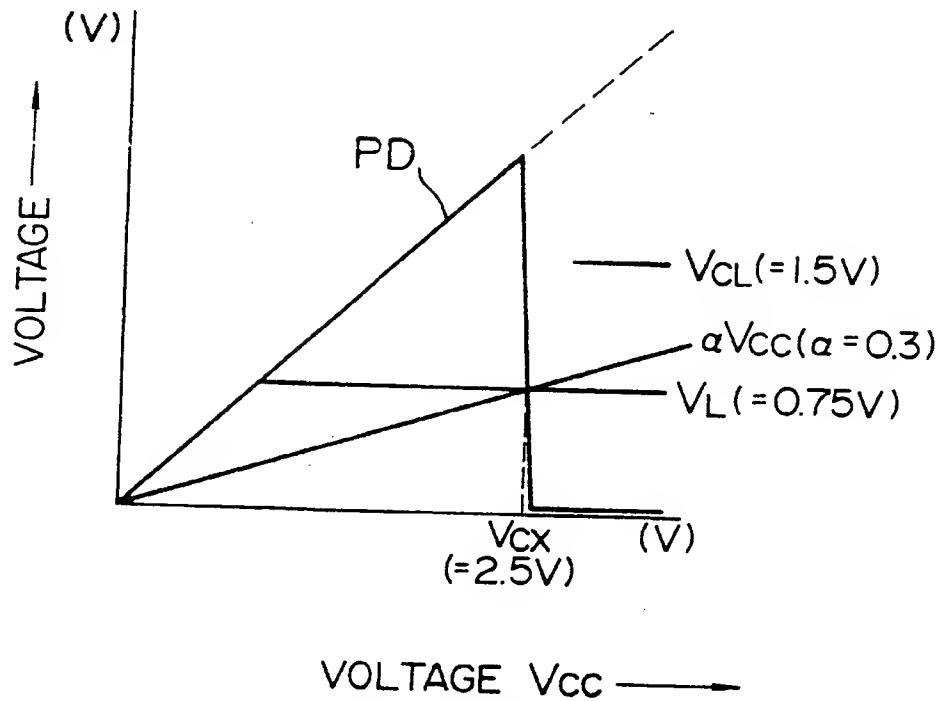


FIG. 2F

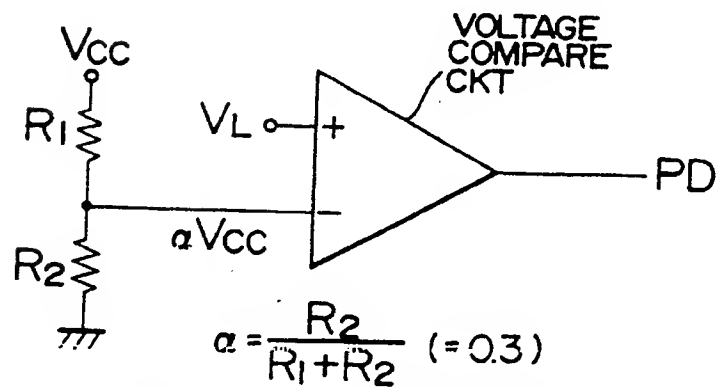


FIG. 3A

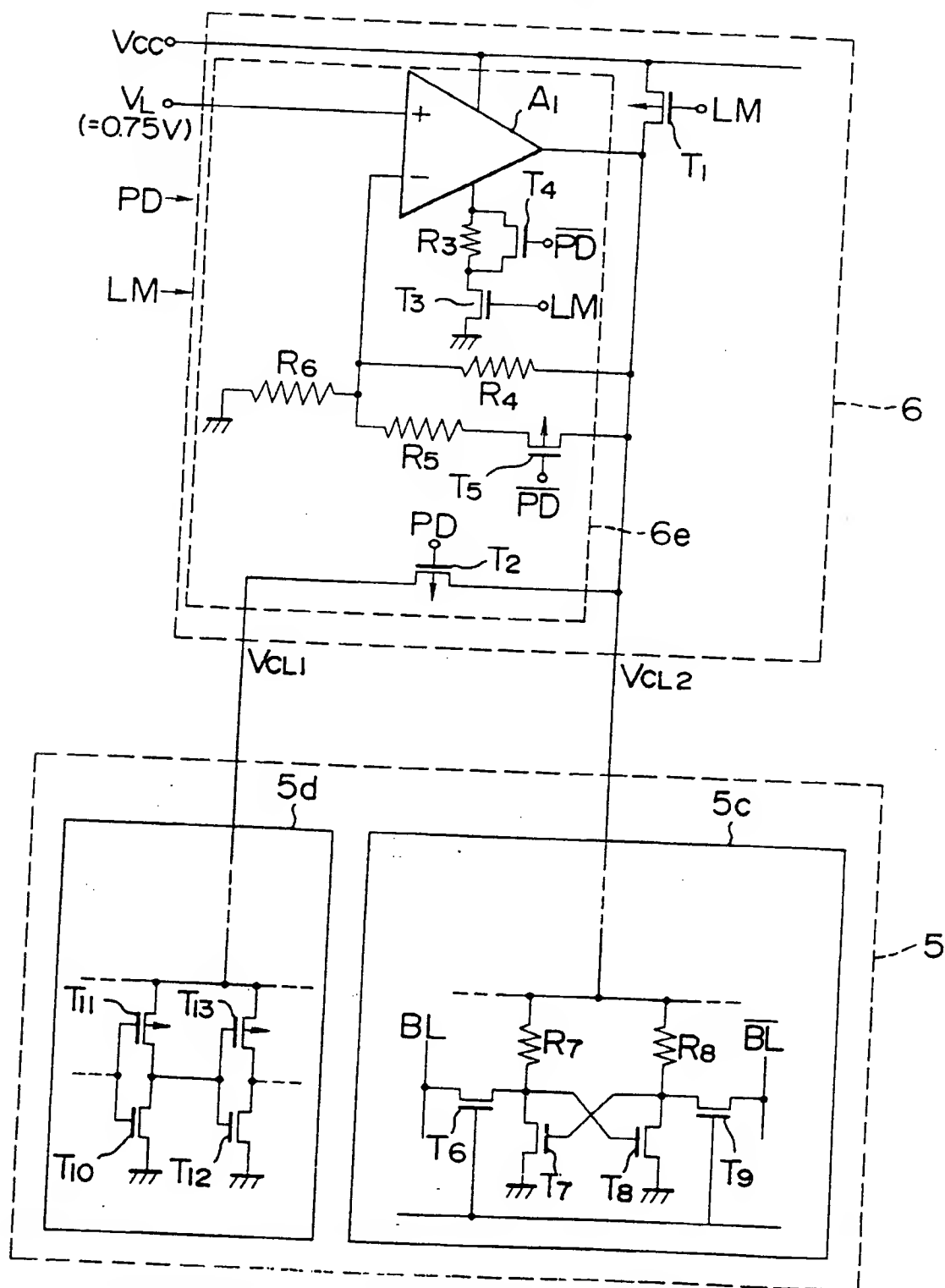
[illegible]



FIG. 3B

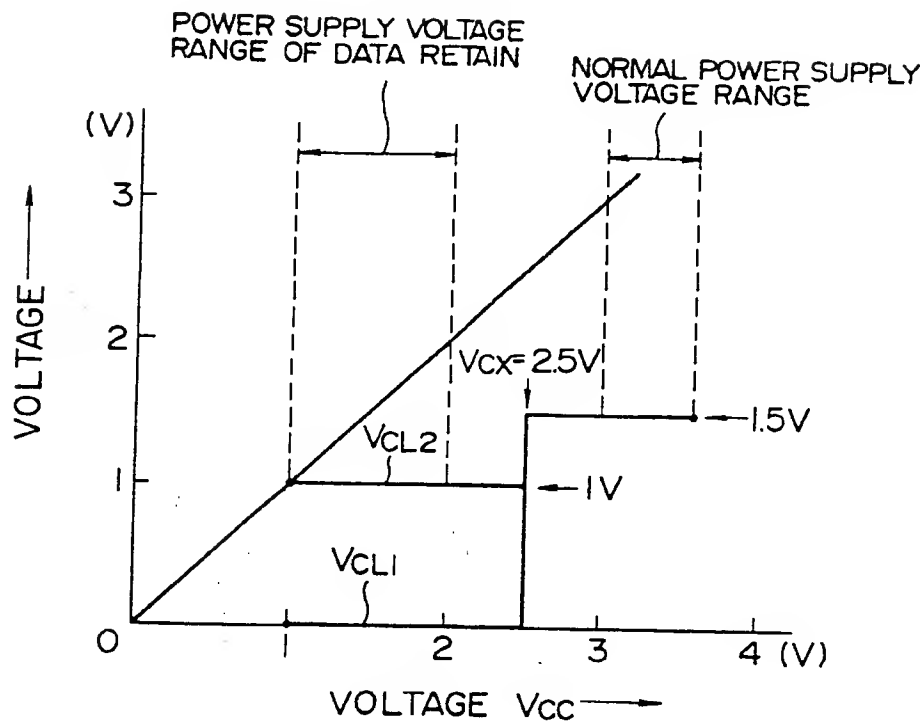
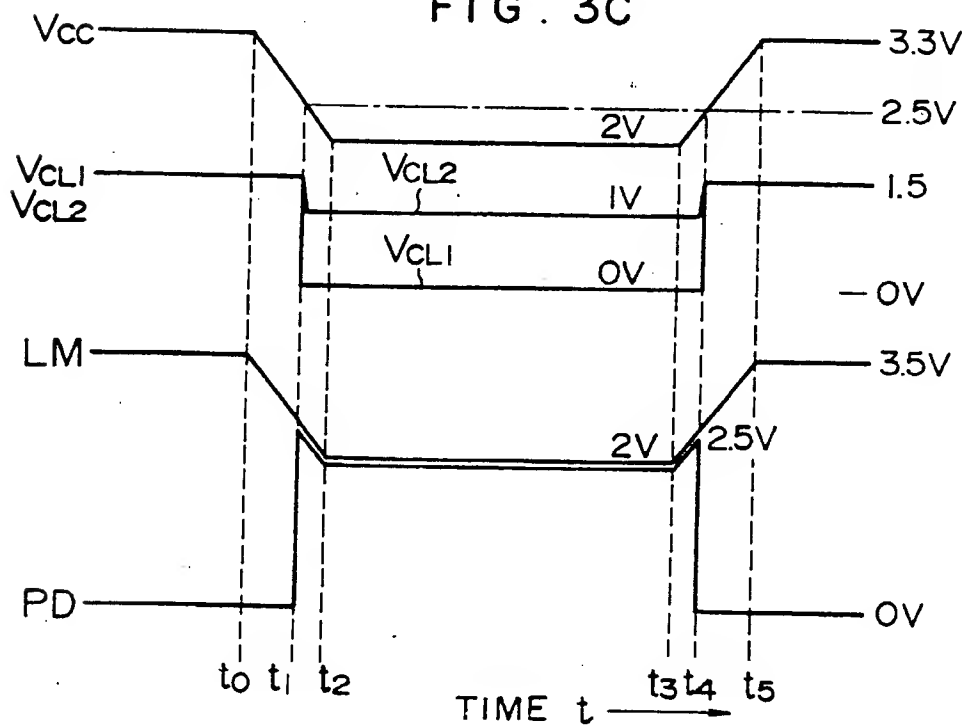


FIG. 3C



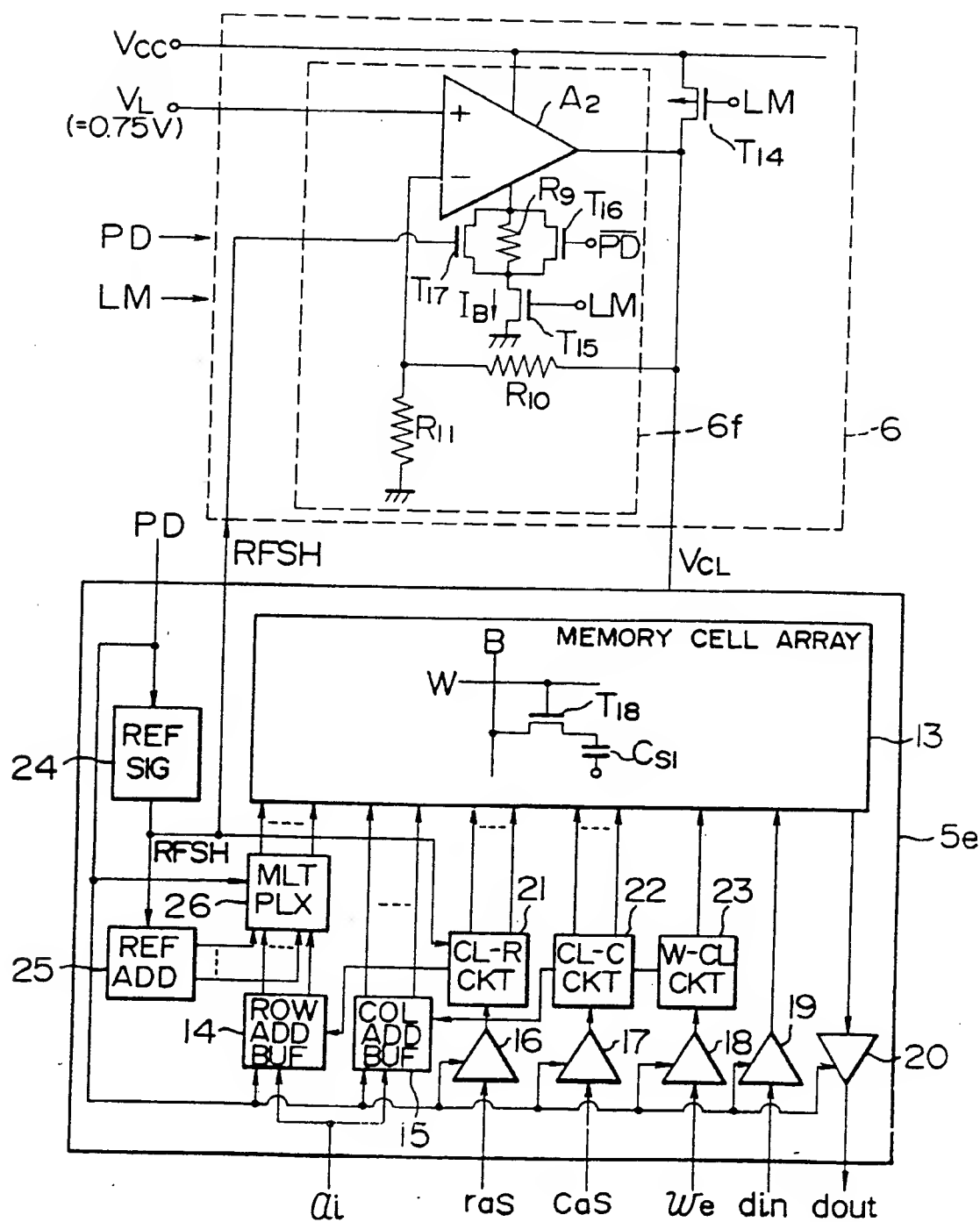


FIG. 4B

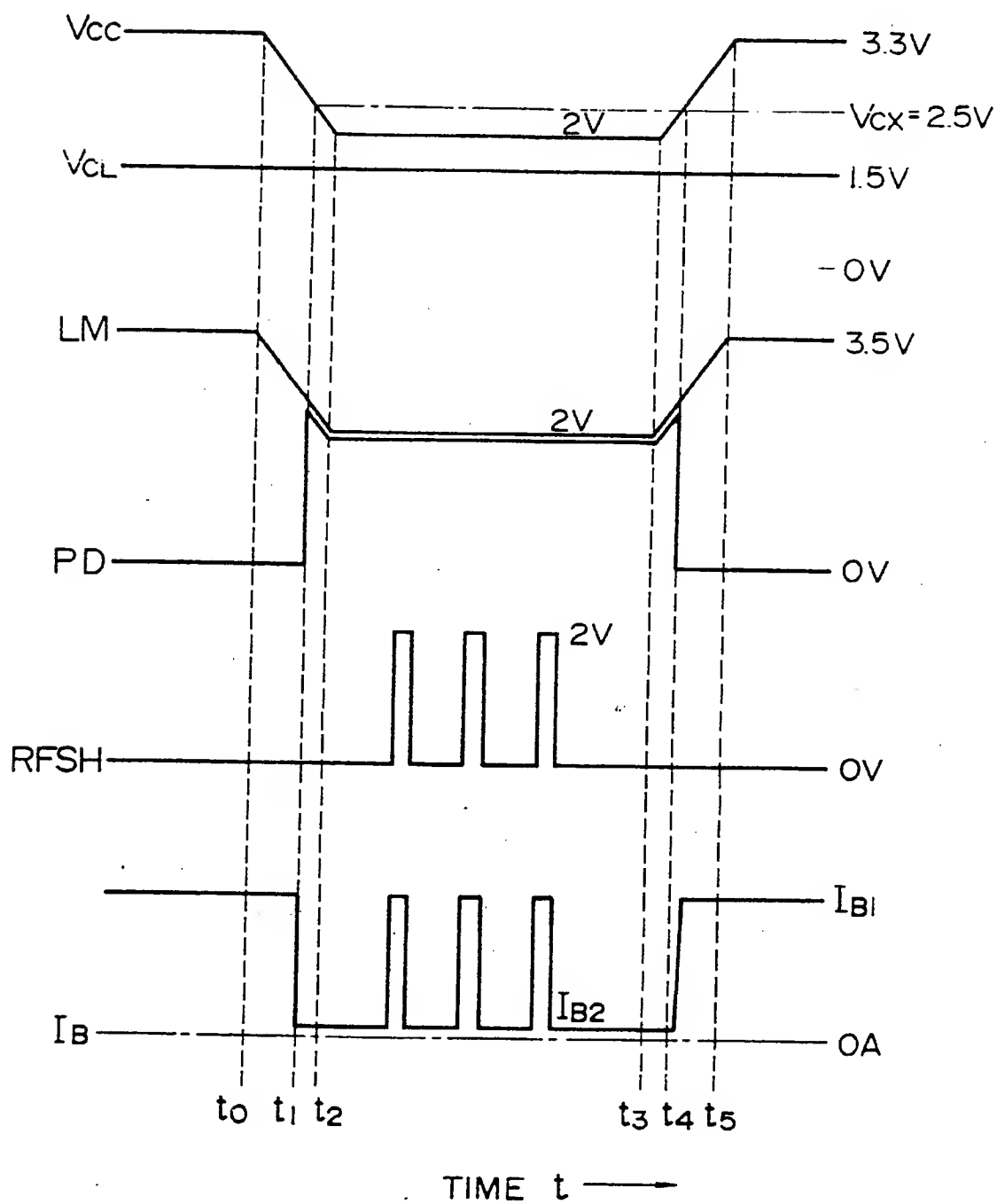


FIG. 5A

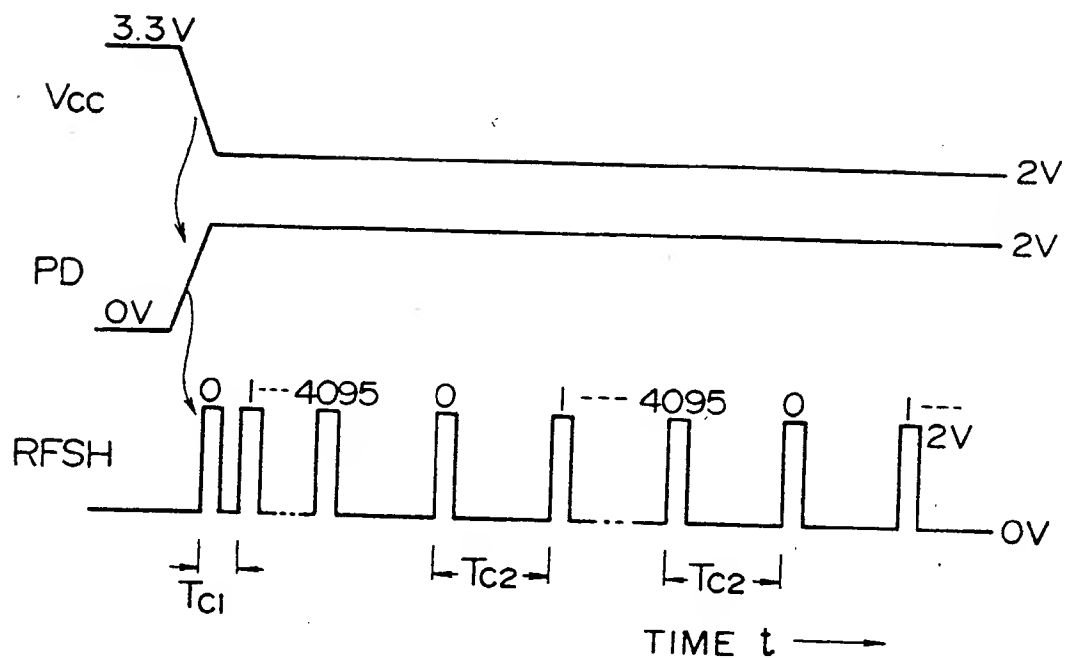


FIG. 5B

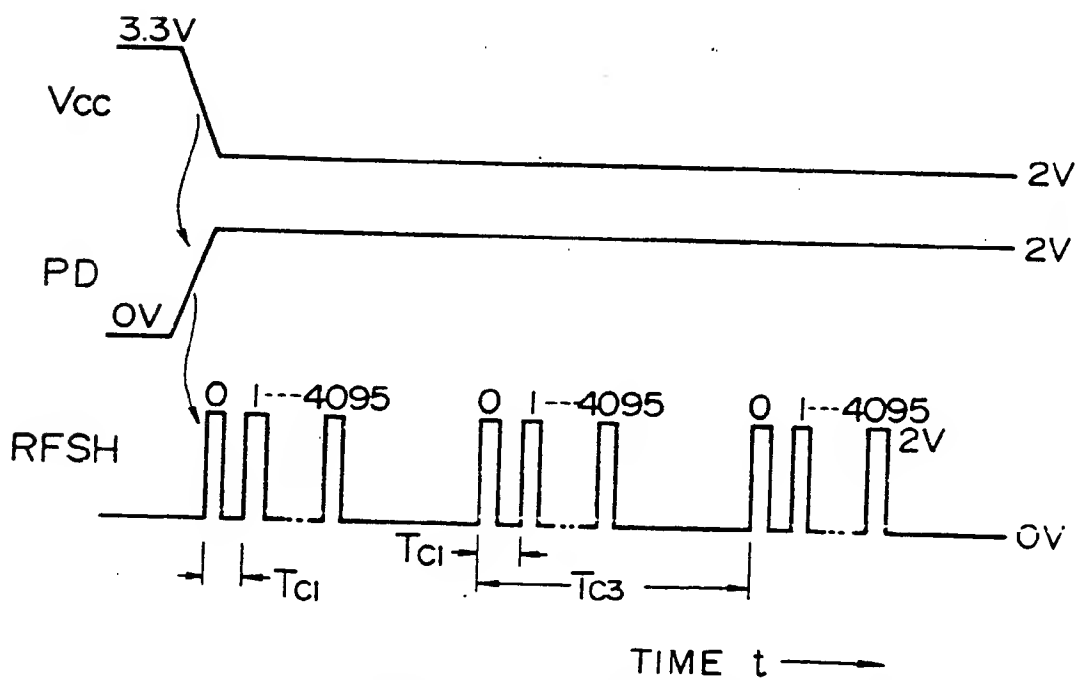


FIG. 6

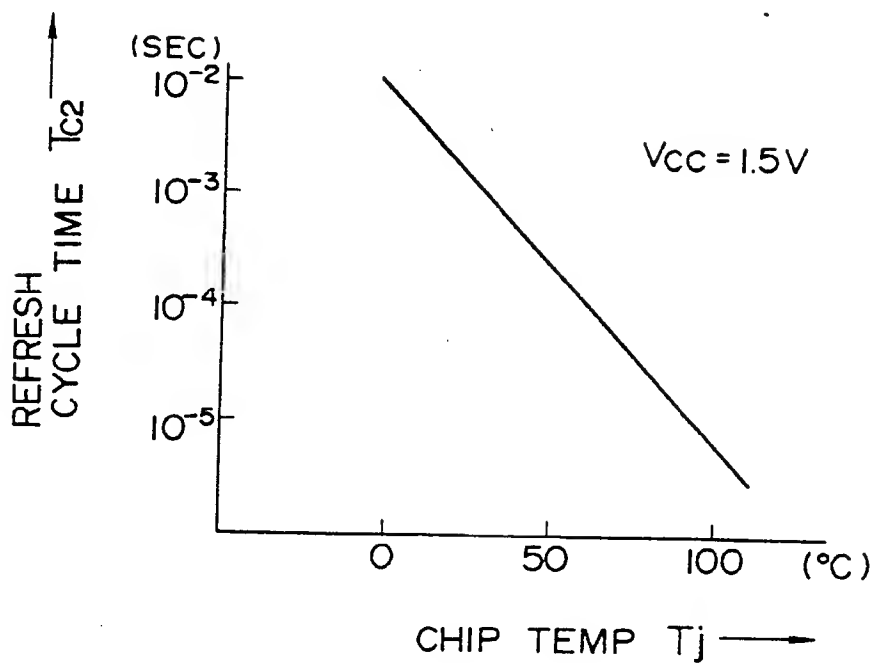


FIG. 7

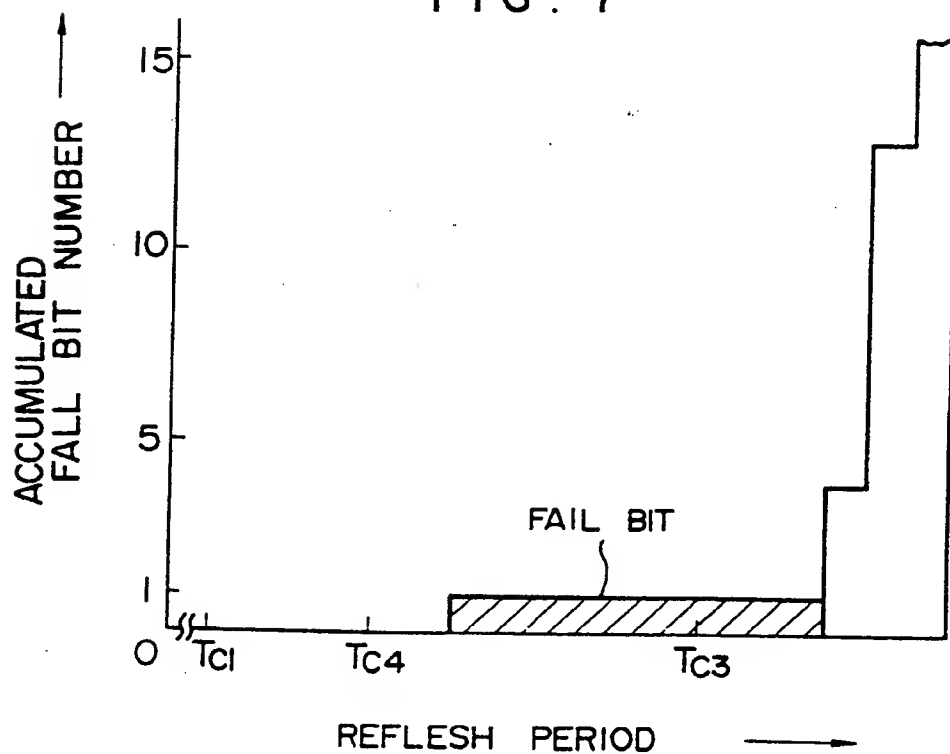


FIG. 8A

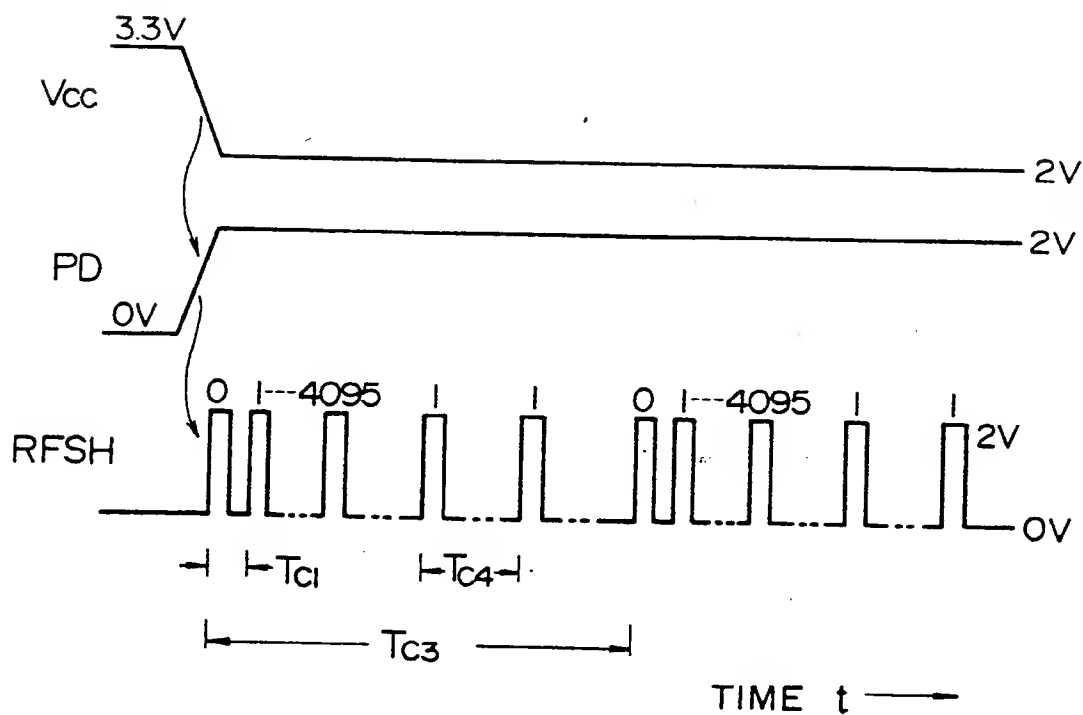


FIG. 8B

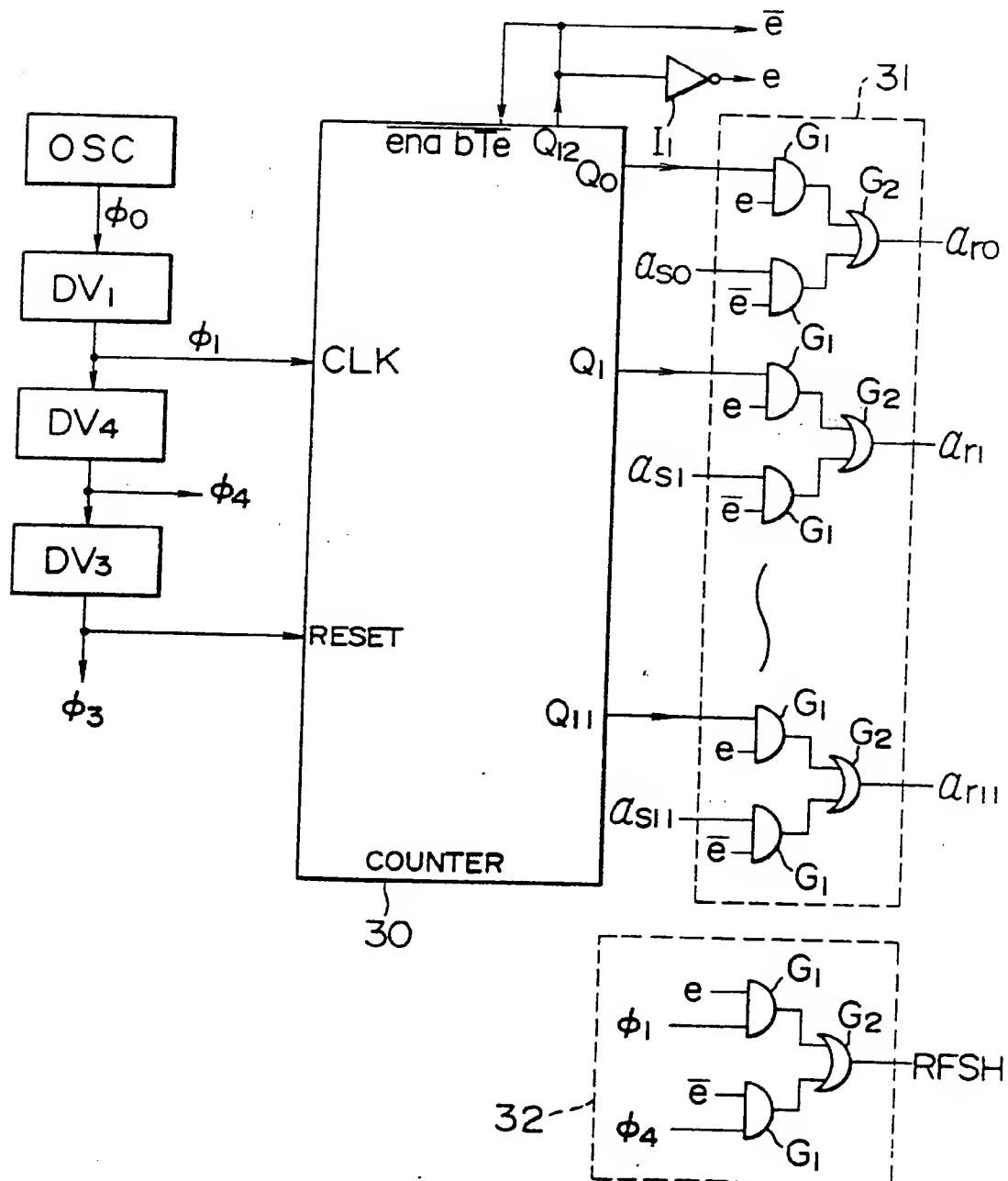


FIG. 8C

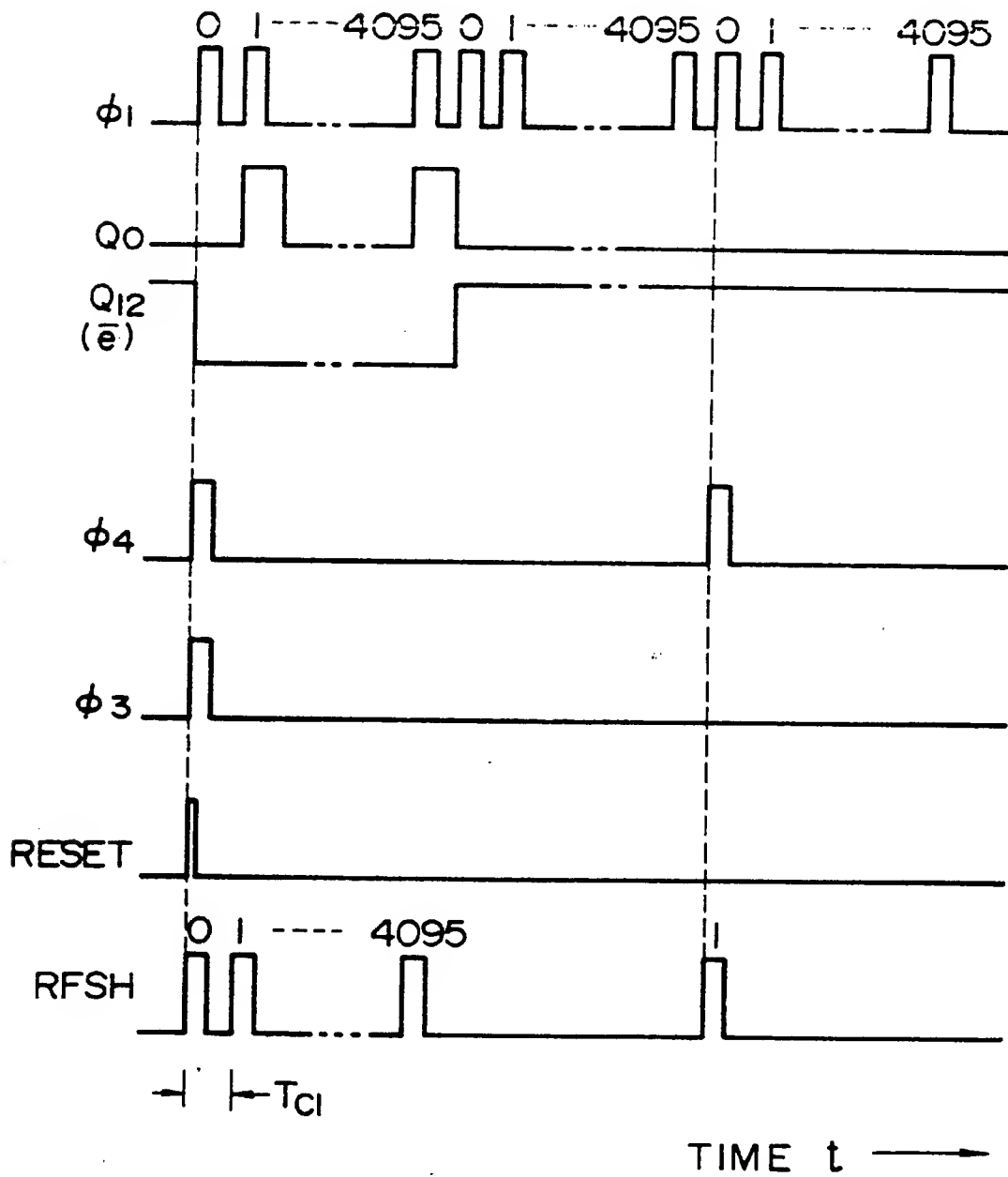




FIG. 9

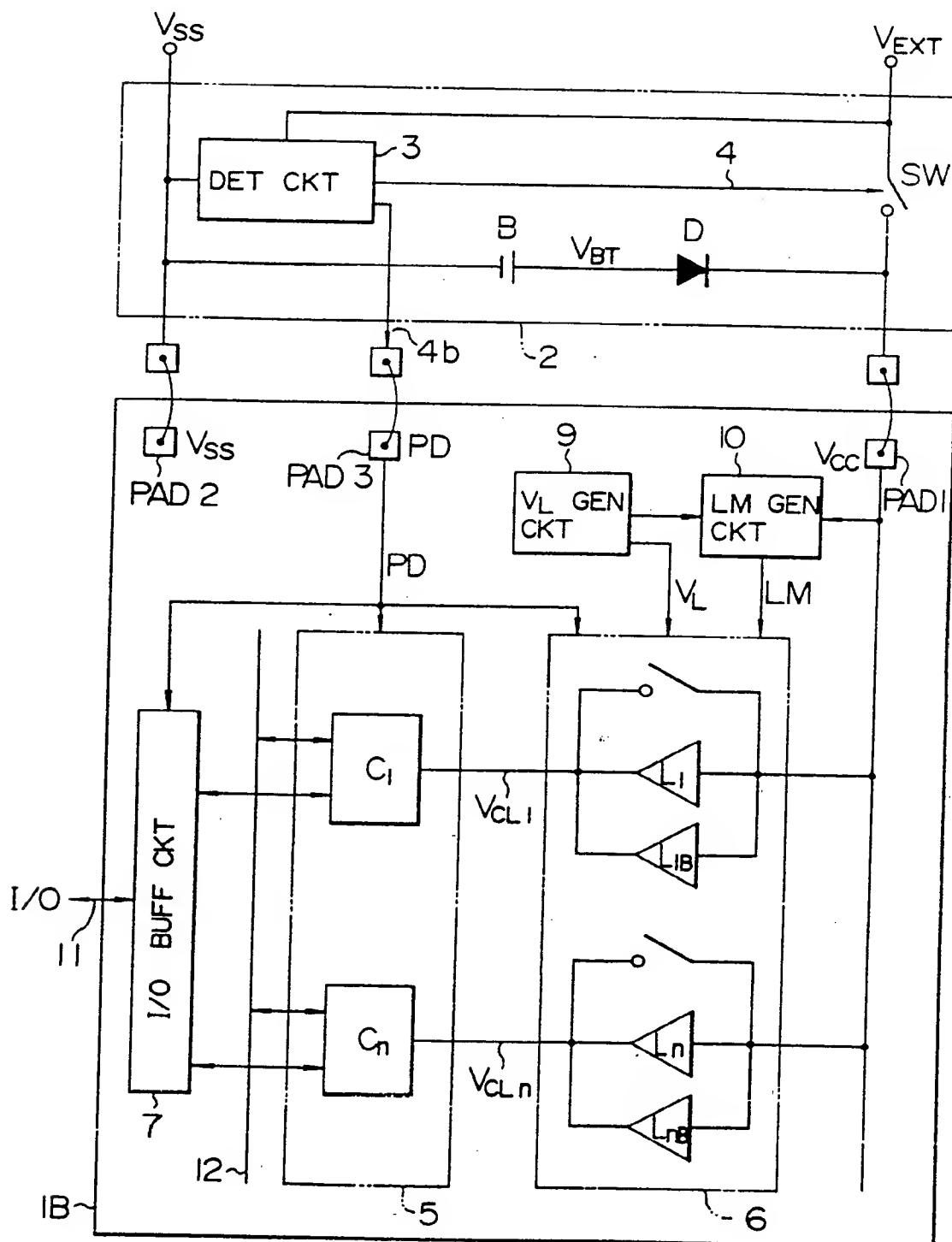


FIG. 10A

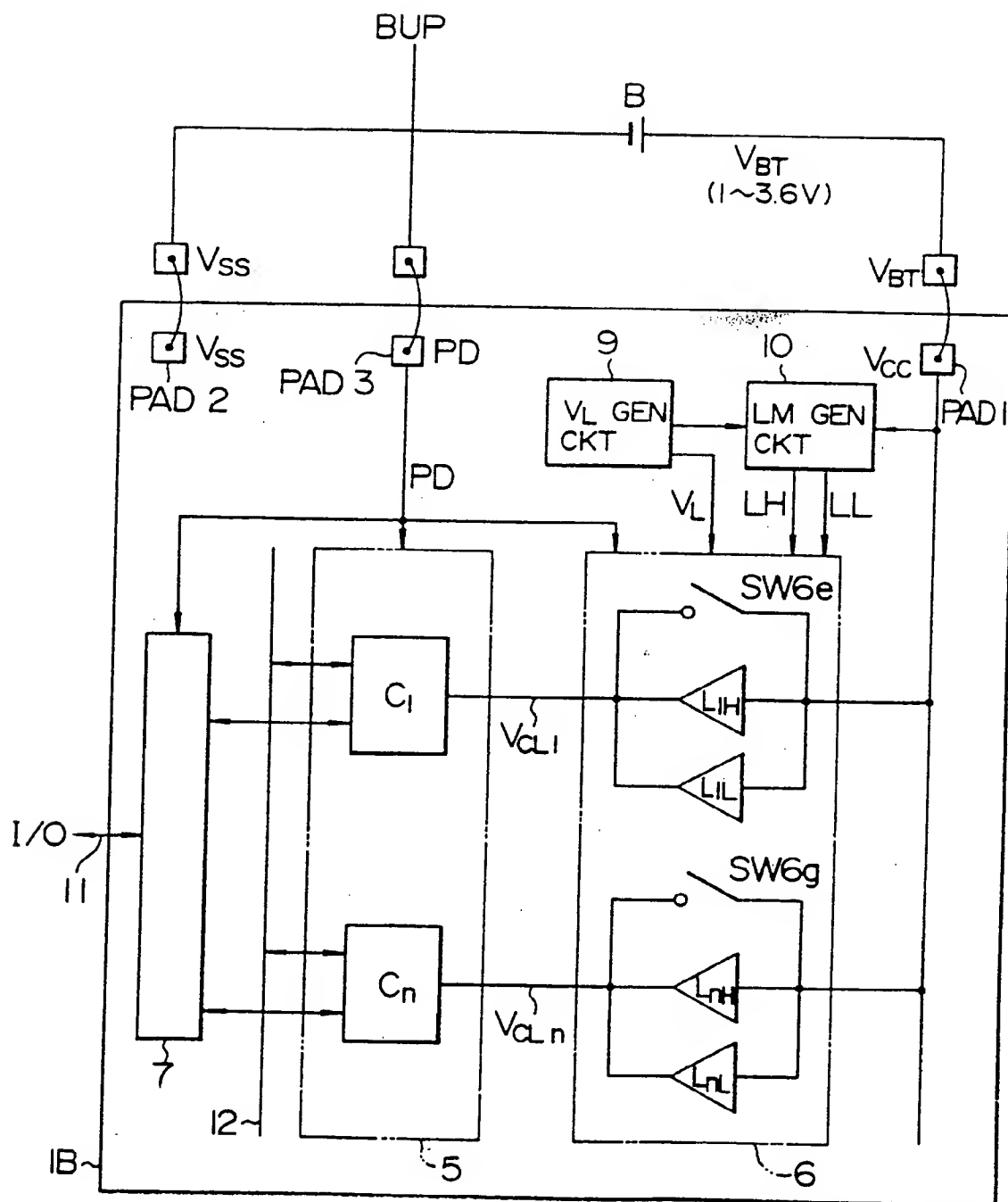


FIG. 10B

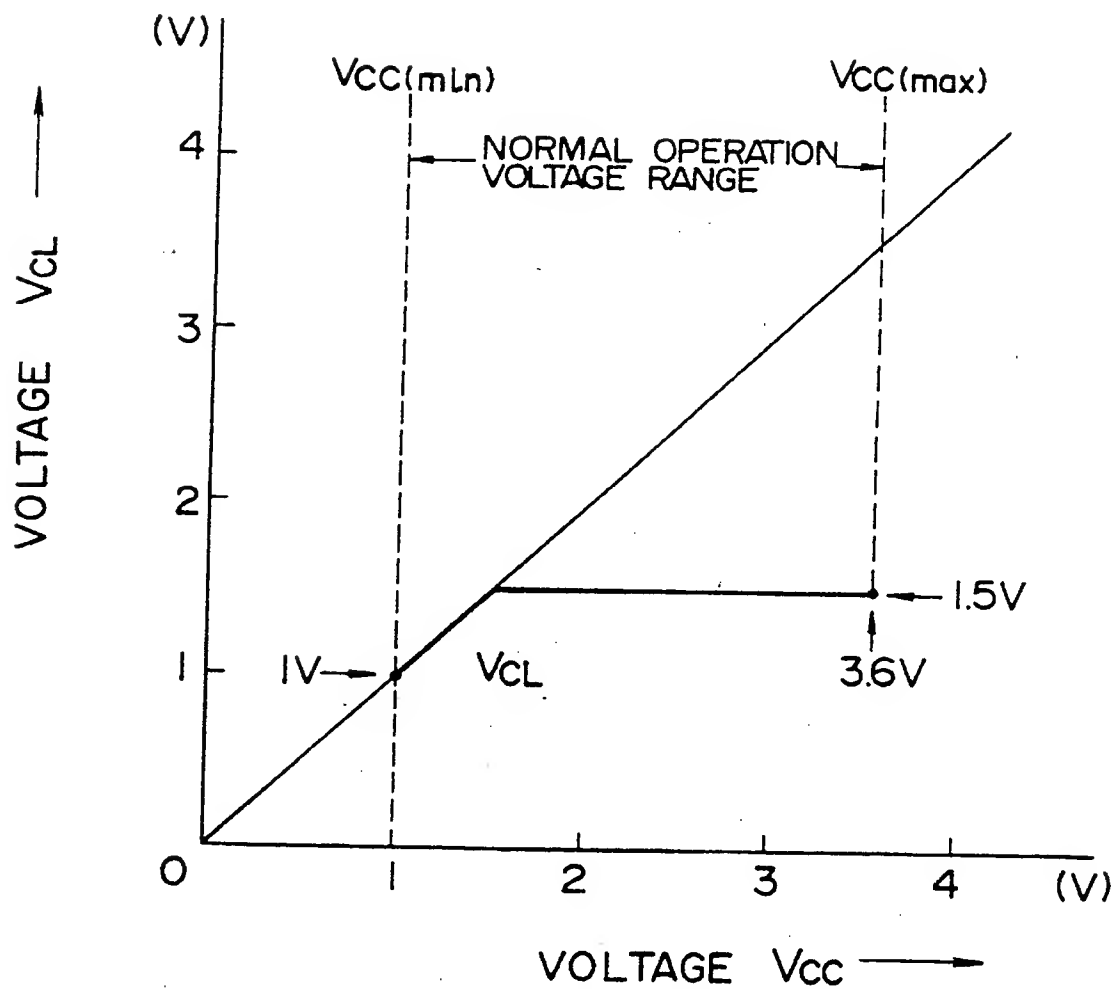


FIG. 10C

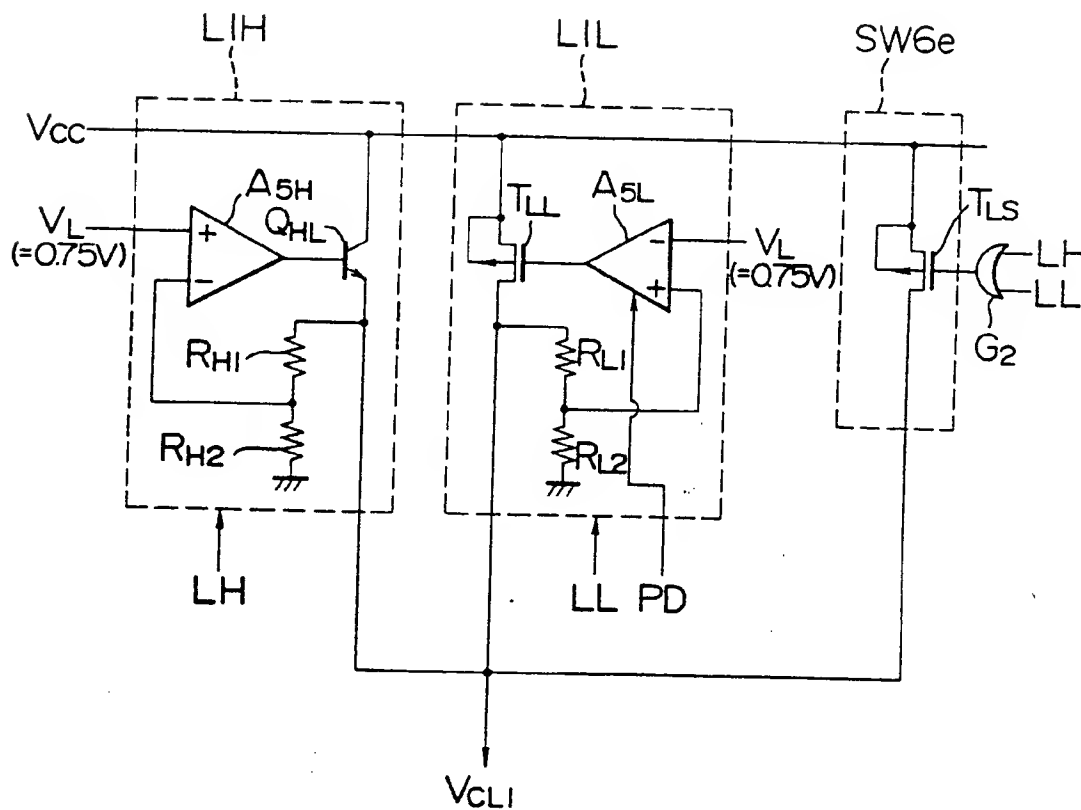


FIG. 11A

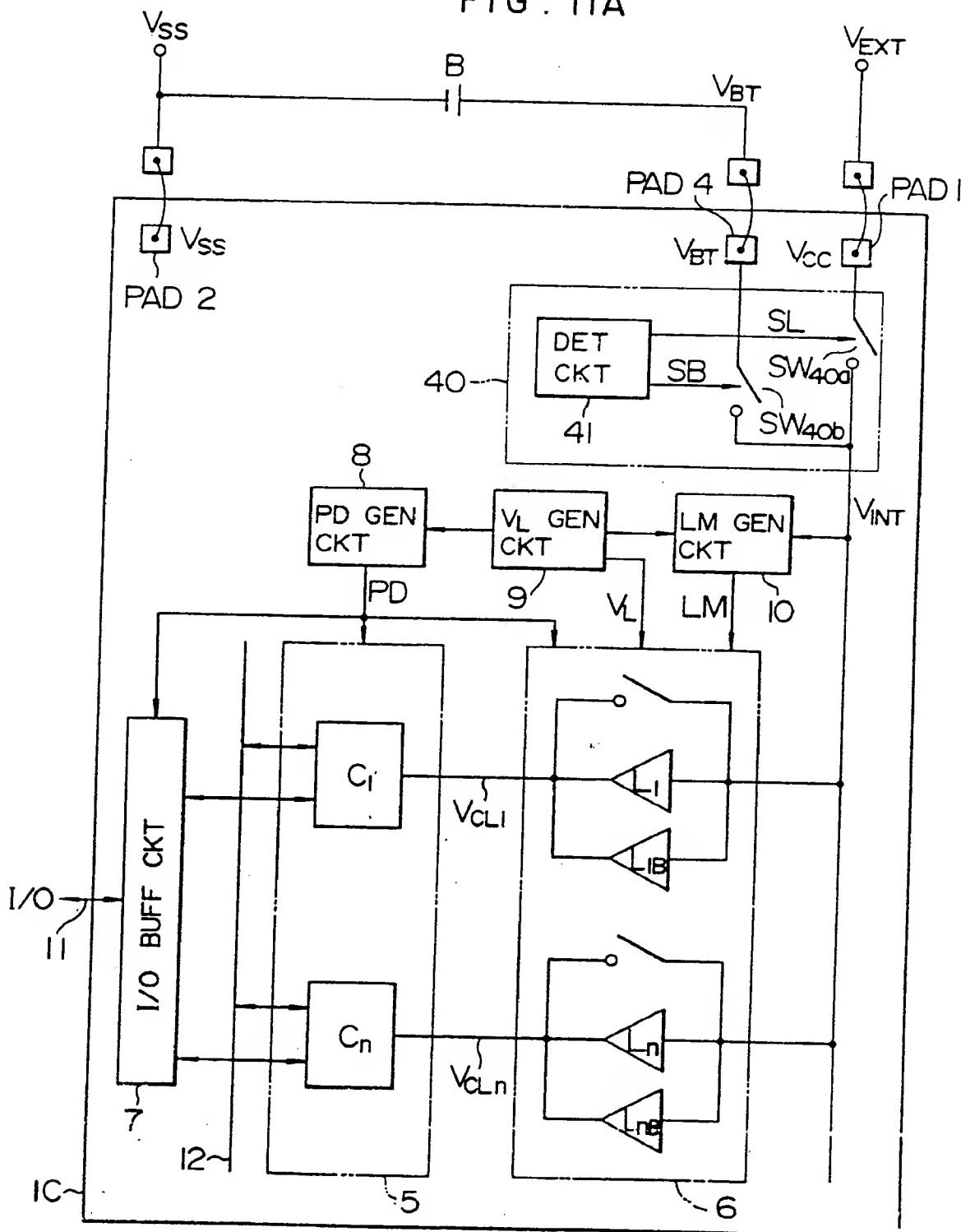


FIG. IIB

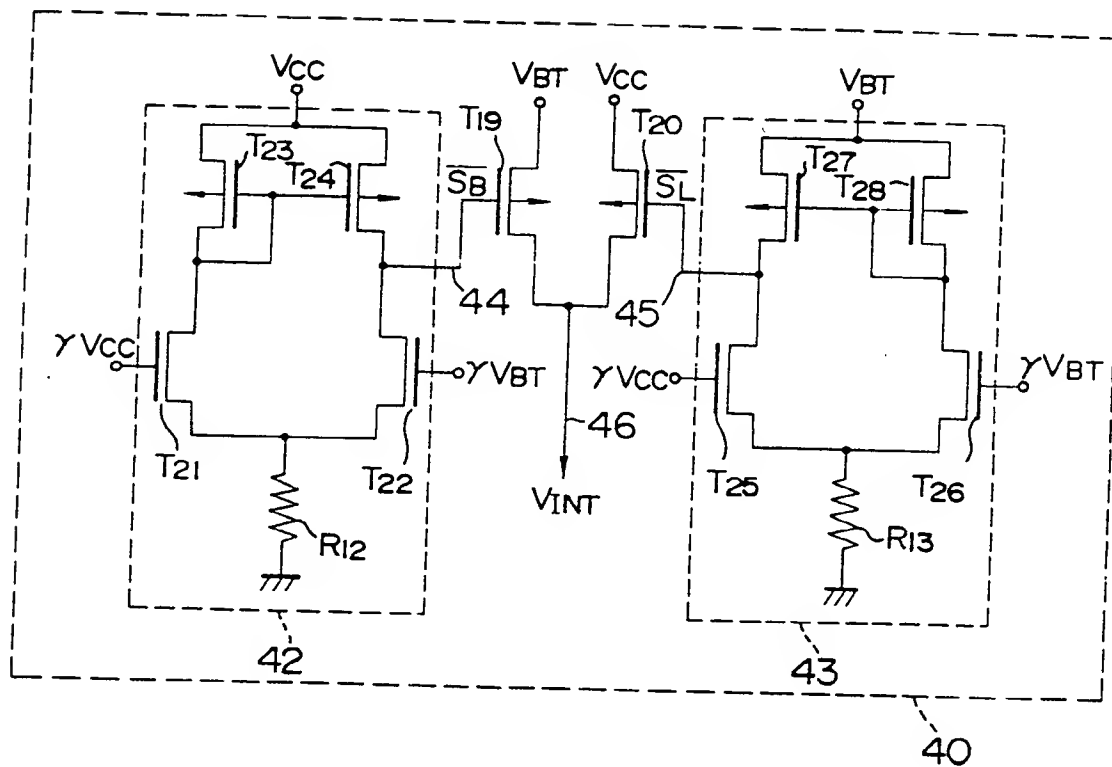


FIG. IIC

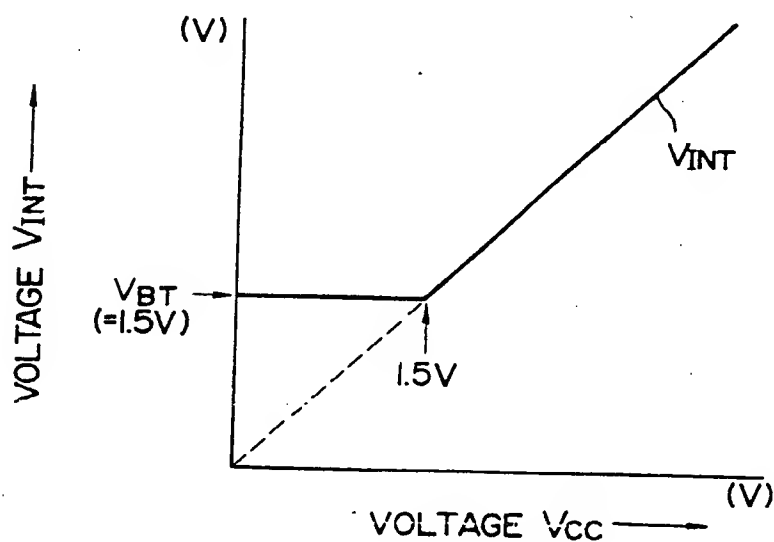


FIG. 12A

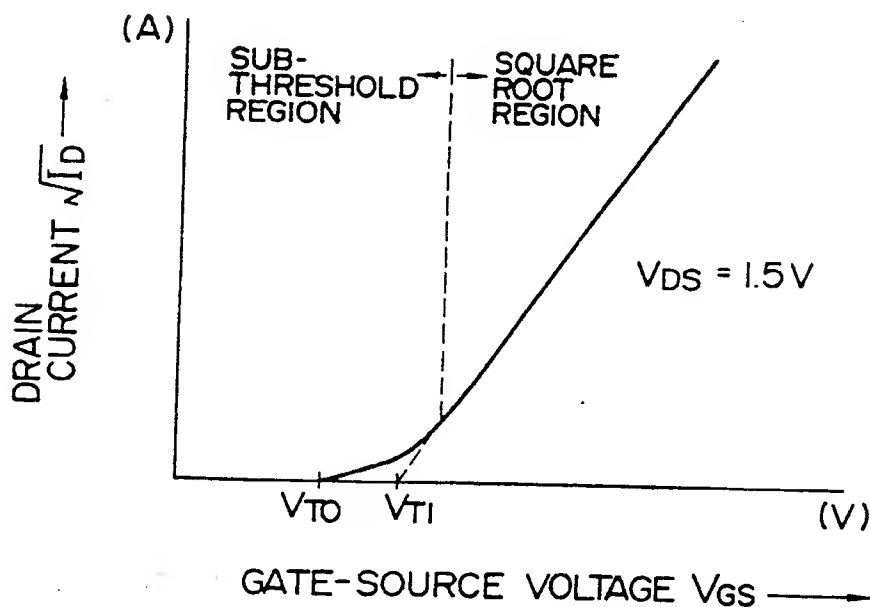


FIG. 12B

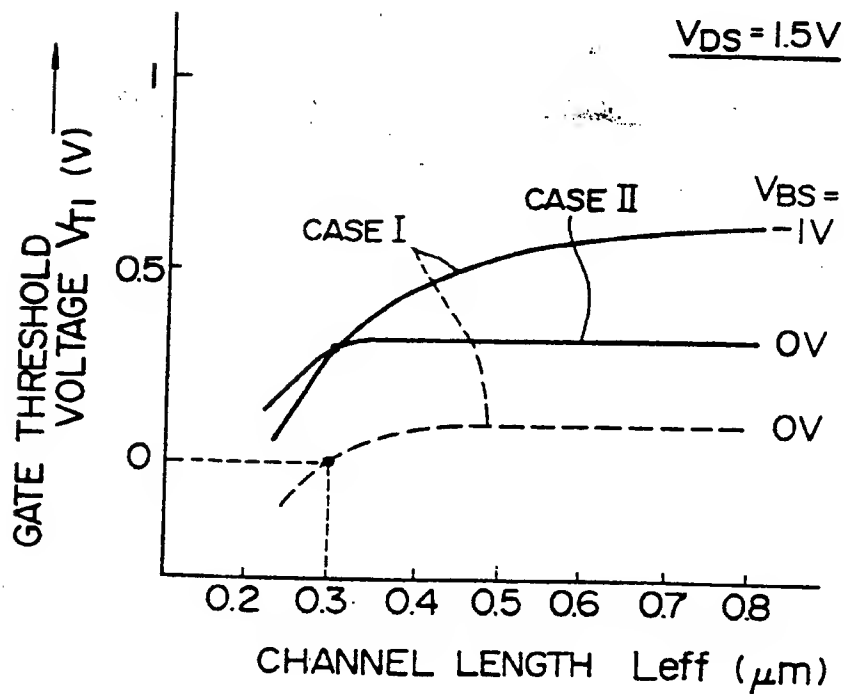


FIG. 13

|  |              | N CHANNEL<br>MOS - FET | P CHANNEL<br>MOS - FET |
|--|--------------|------------------------|------------------------|
| GATE OXIDE<br>THICKNESS<br>$t_{ox}$ (nm)             |              | 6.5<br>(5~8)           | 6.5<br>(5~8)           |
| EFFECTIVE CHANNEL<br>LENGTH<br>$L_{eff}$ ( $\mu m$ ) |              | 0.3<br>(0.2~0.4)       | 0.3<br>(0.2~0.4)       |
| GATE<br>THRESHOLD<br>VOLTAGE                         | $V_{TO}$ (V) | 0.1<br>(0~0.2)         | -0.1<br>(-0.2~0)       |
|  | $V_{TI}$ (V) | 0.3<br>(0.2~0.4)       | -0.3<br>(-0.4~-0.2)    |



FIG. 14A

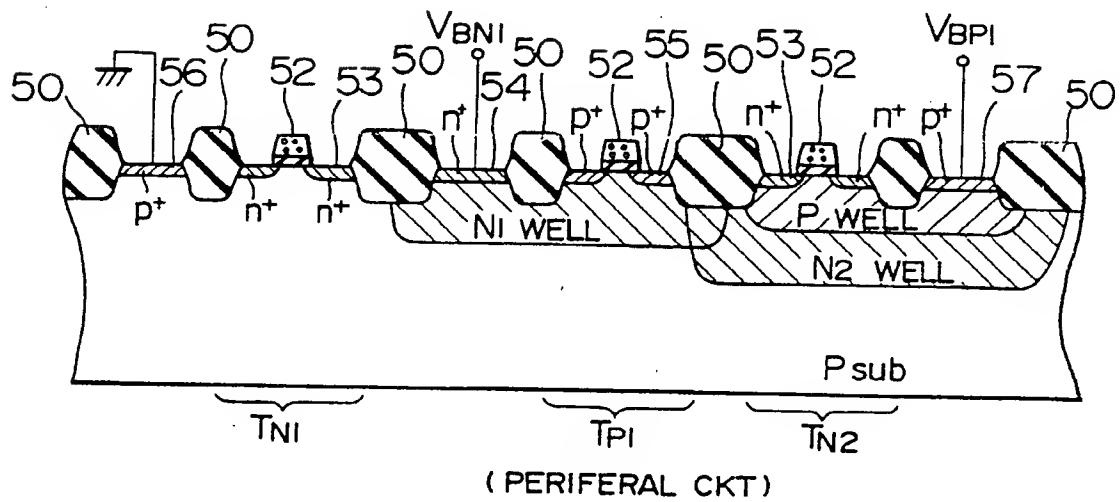


FIG. 14B

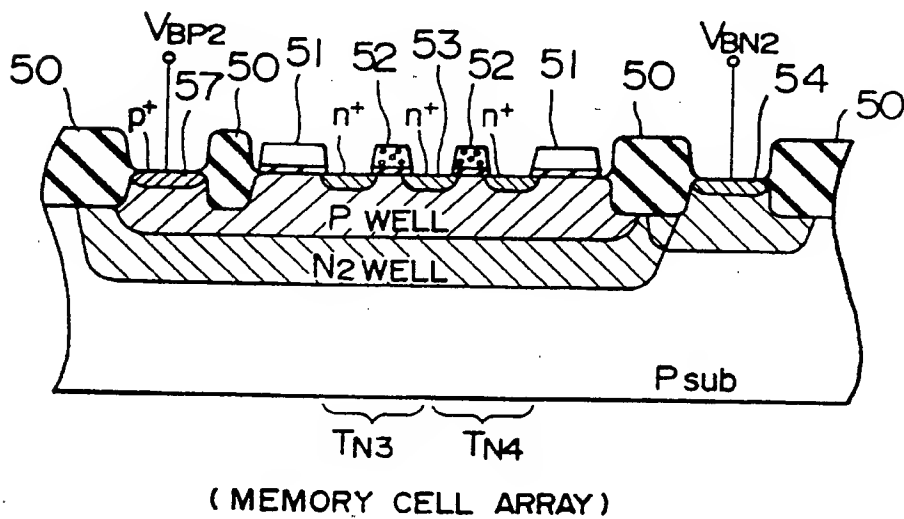




FIG. 15C

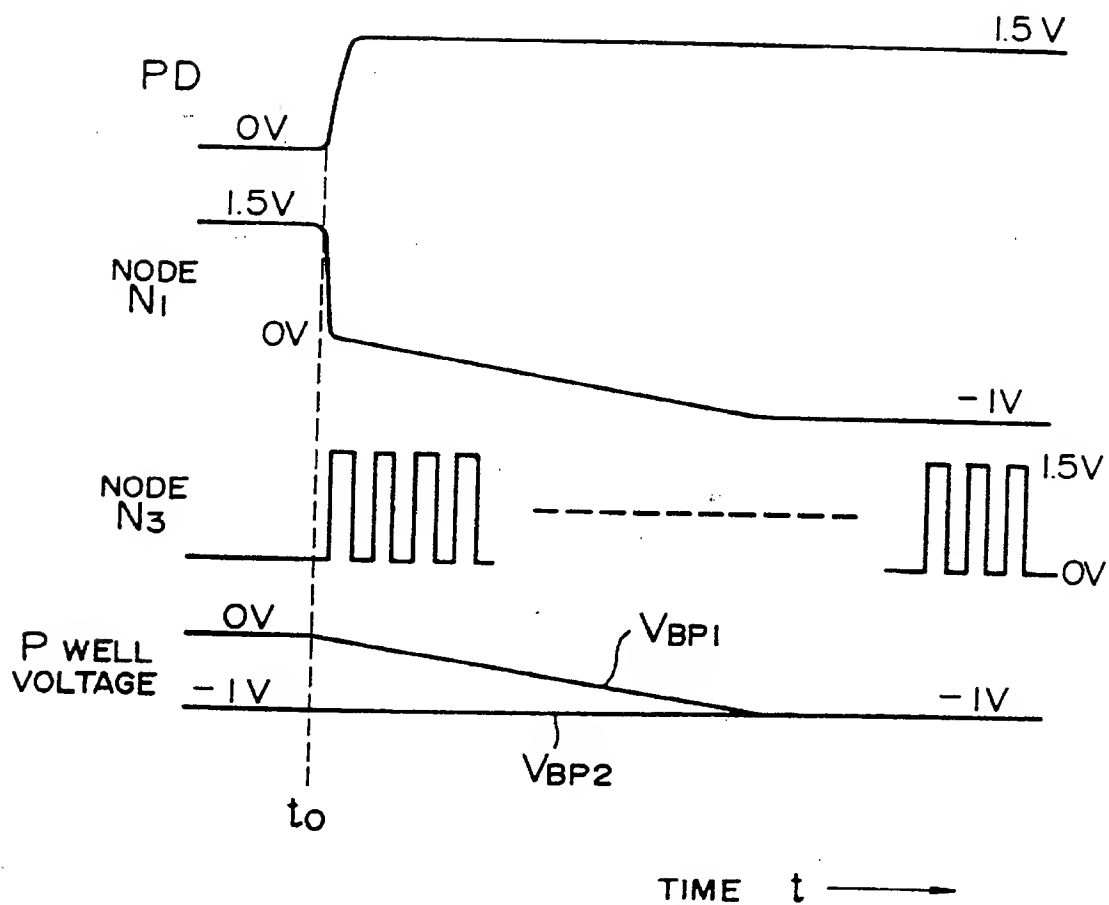
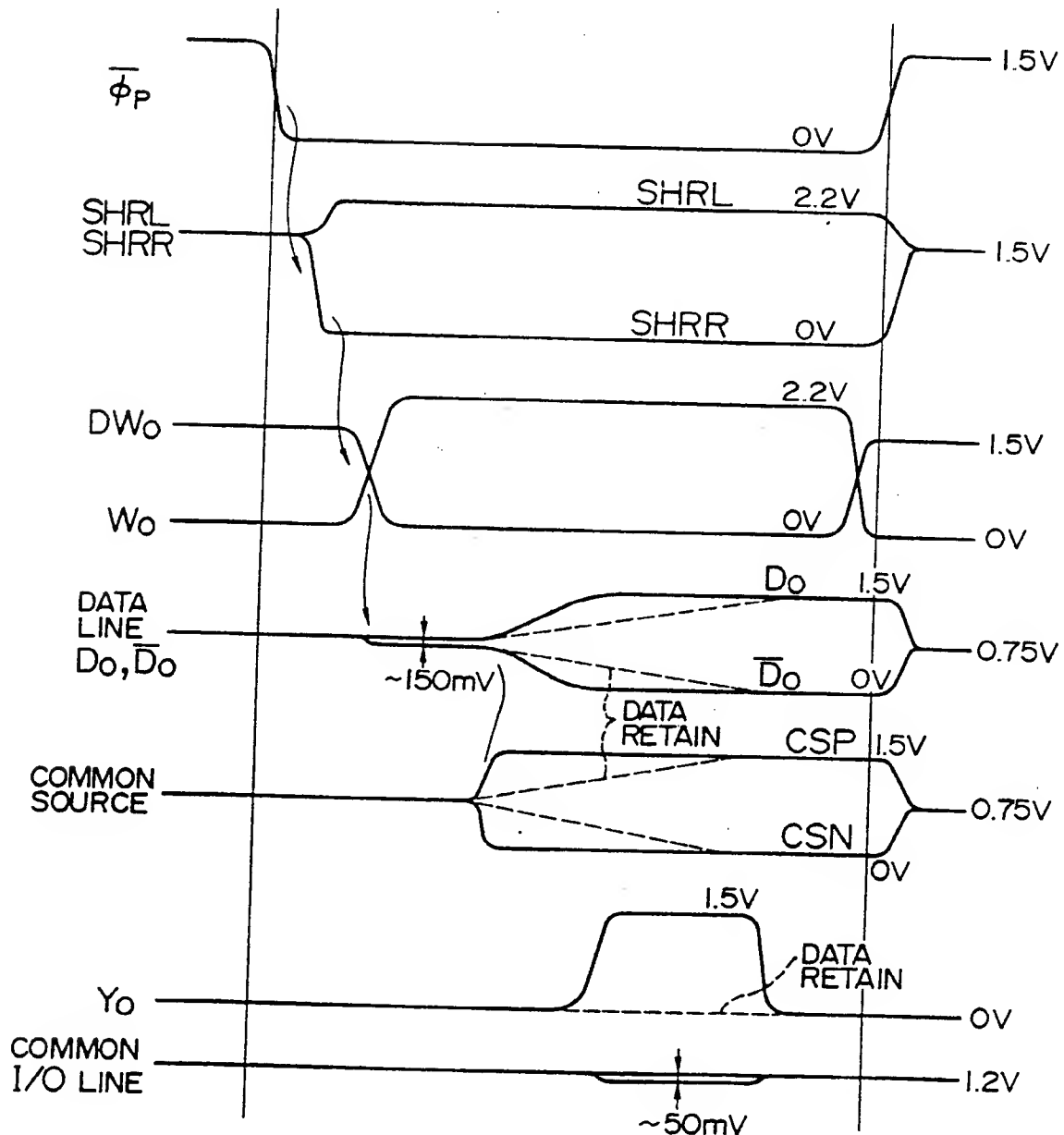




FIG. 16B



TIME  $t$  →

FIG. 16B

FIG. 17A

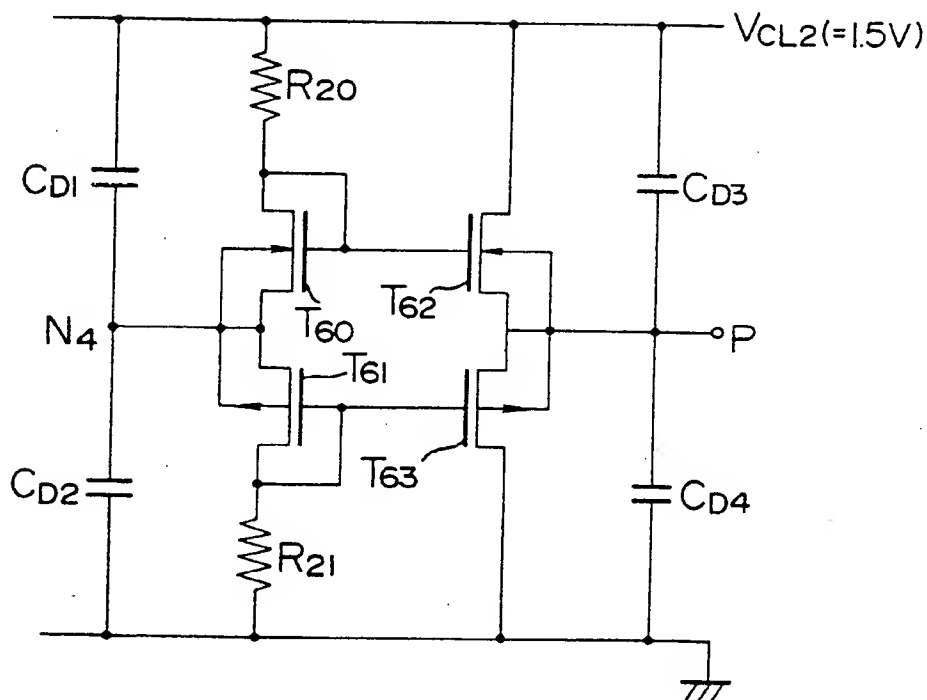


FIG. 17B

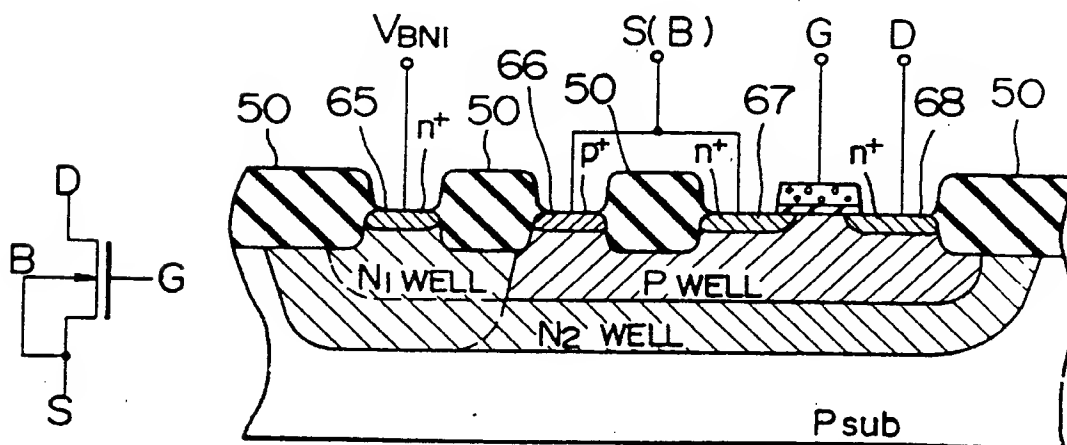


FIG. 18A

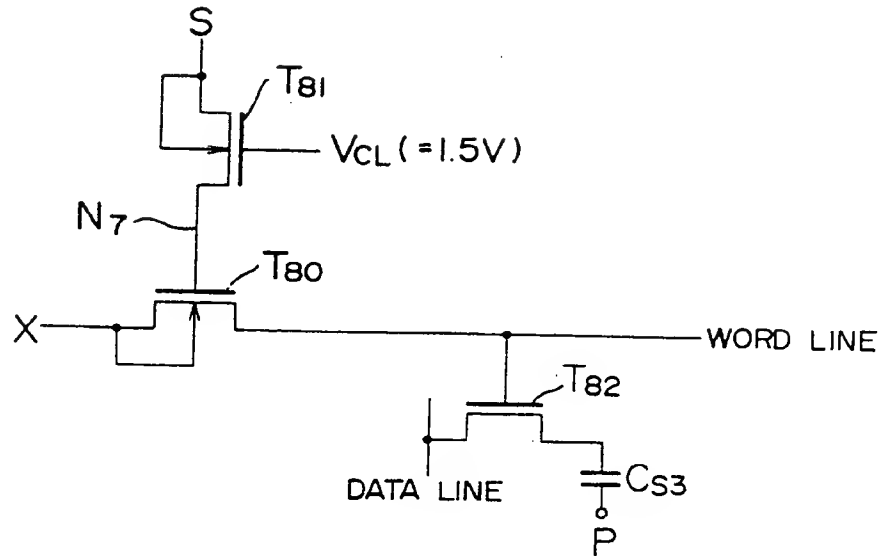


FIG. 18B

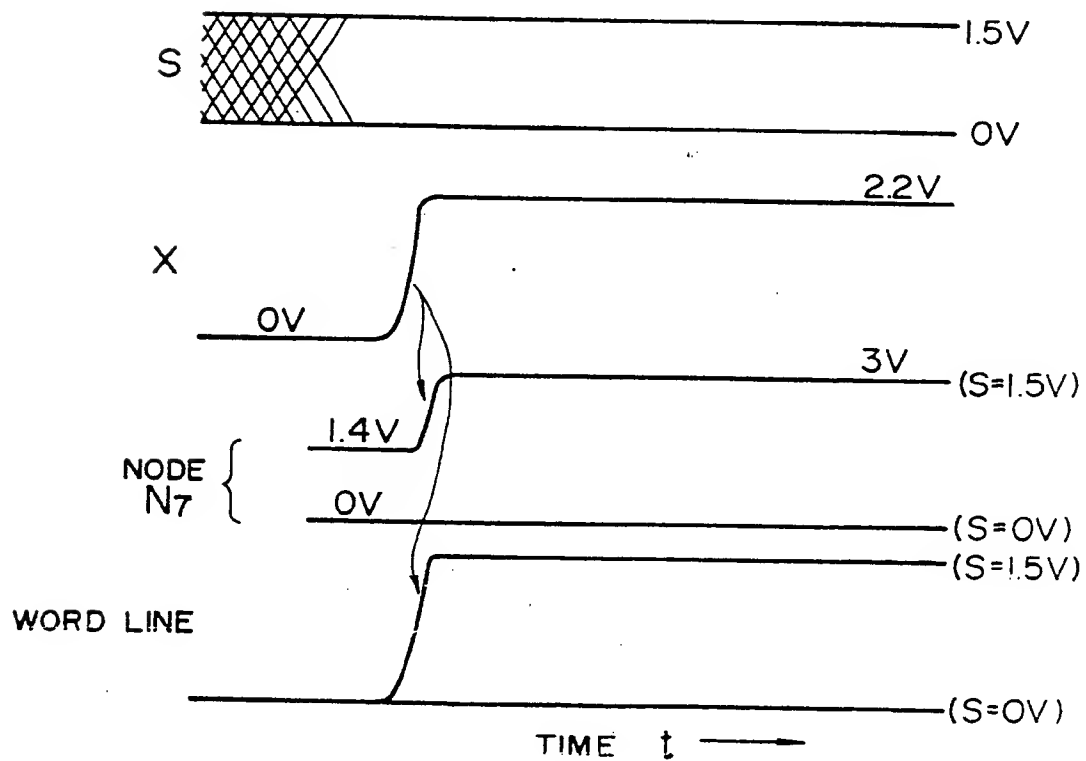


FIG. 18C

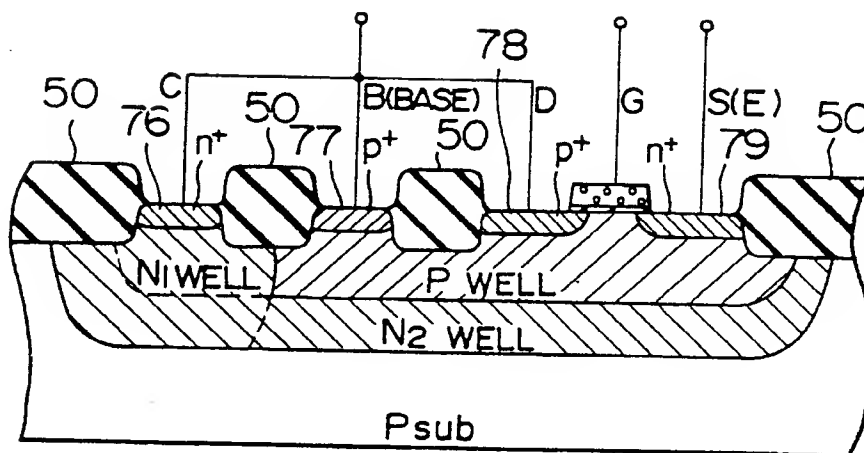


FIG. 18D

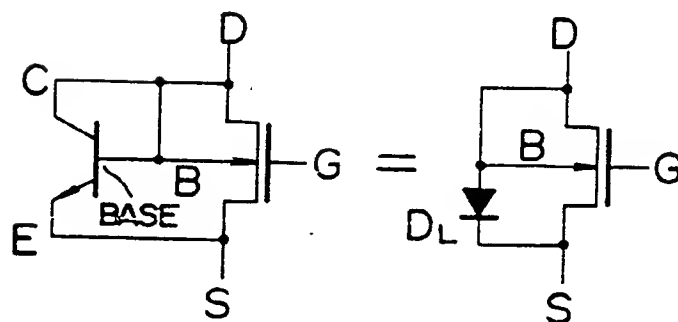




FIG. 19A

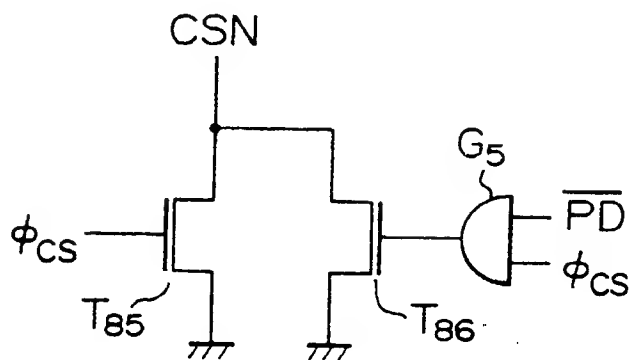


FIG. 19B

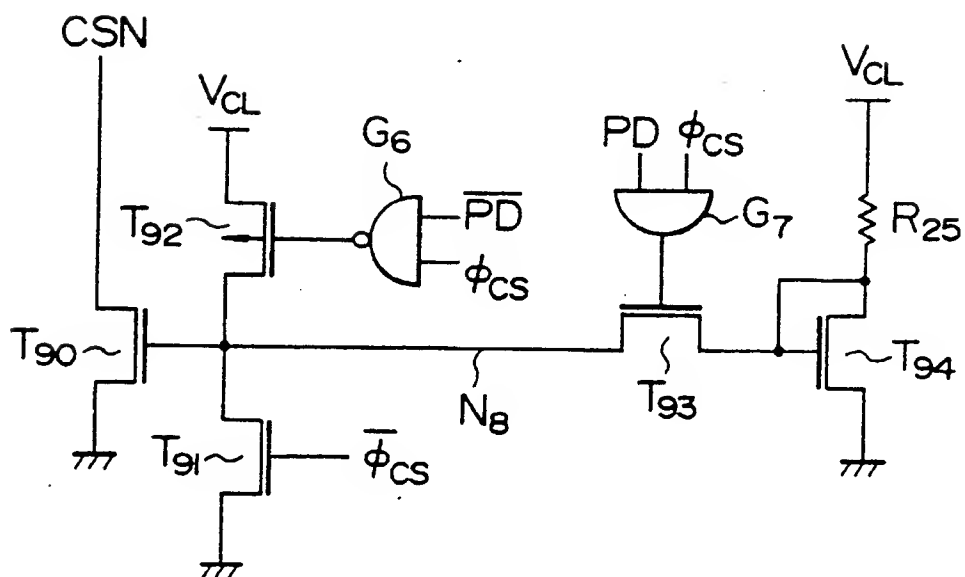


FIG. 20A

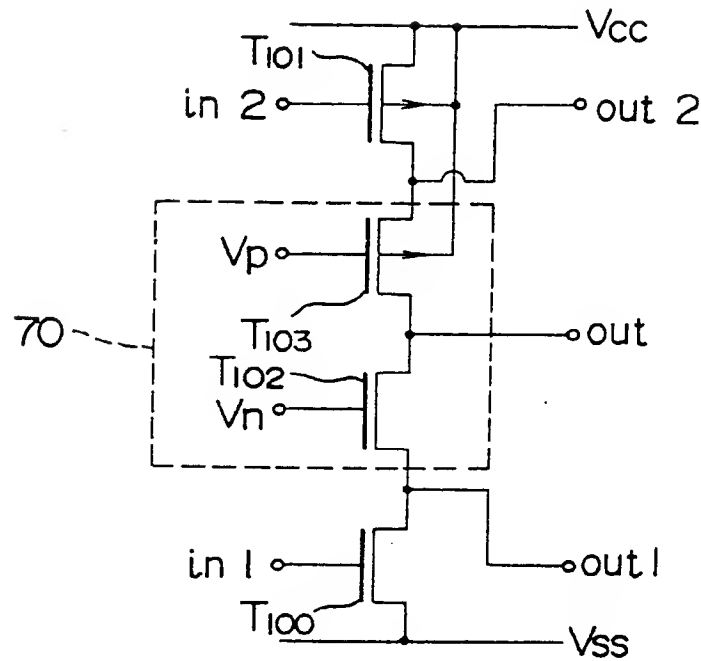


FIG. 20B

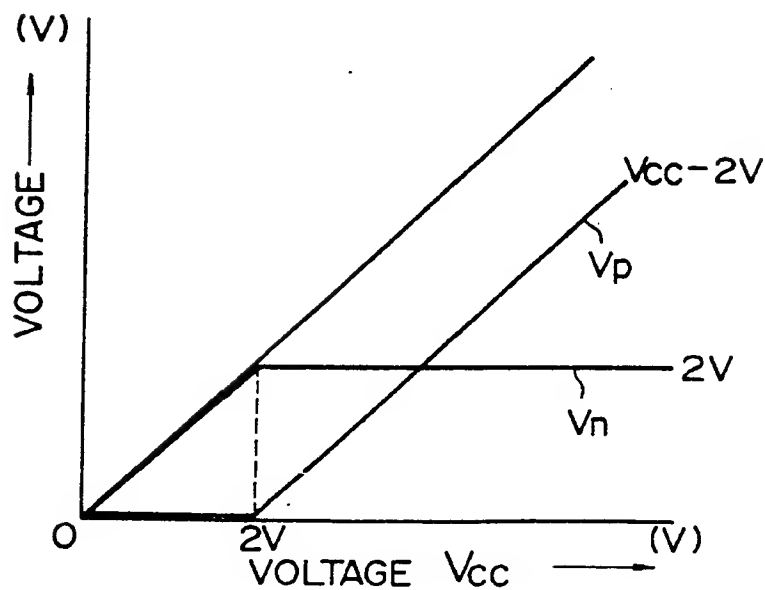


FIG. 20C

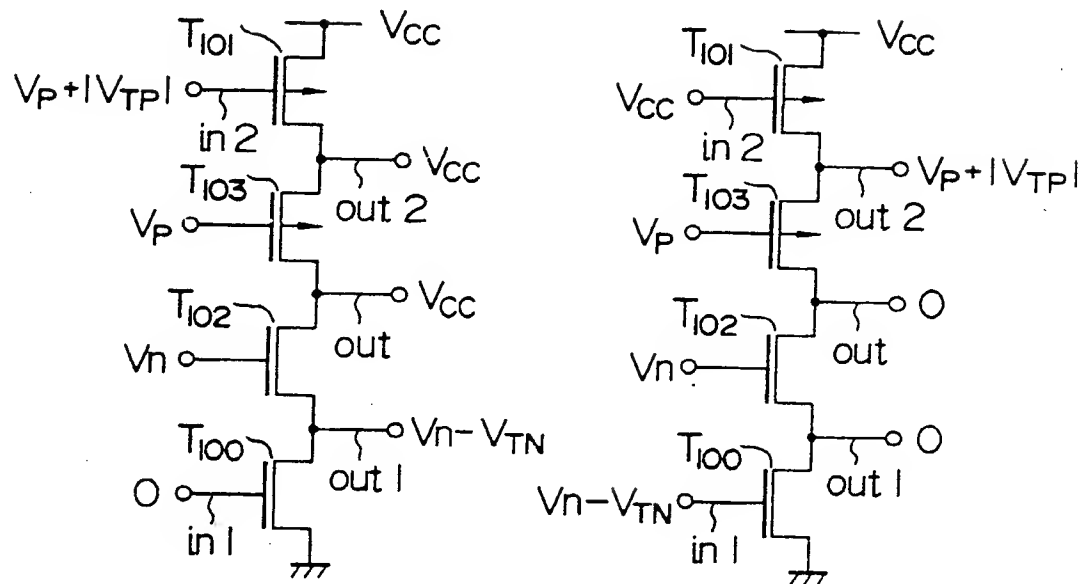


FIG. 20D

|           | LOW INPUT<br>( $T_{100}$ CUT OFF, $T_{101}$ ON ) | HIGH INPUT<br>( $T_{100}$ ON, $T_{101}$ CUT OFF ) |
|-----------|--|---|
| $T_{101}$ | $V_{CC} - V_p +  V_{TP} $                        | $V_{CC} - V_p +  V_{TP} $                         |
| $T_{103}$ | $V_{CC} - V_p$                                   | $V_p$   |
| $T_{102}$ | $V_{CC} - V_n$                                   | $V_n$   |
| $T_{100}$ | $V_n - V_{TN}$                                   | $V_n - V_{TN}$                                    |

MAXIMUM VOLTAGE APPLIED TO GATE ELECTRODE

FIG. 21A

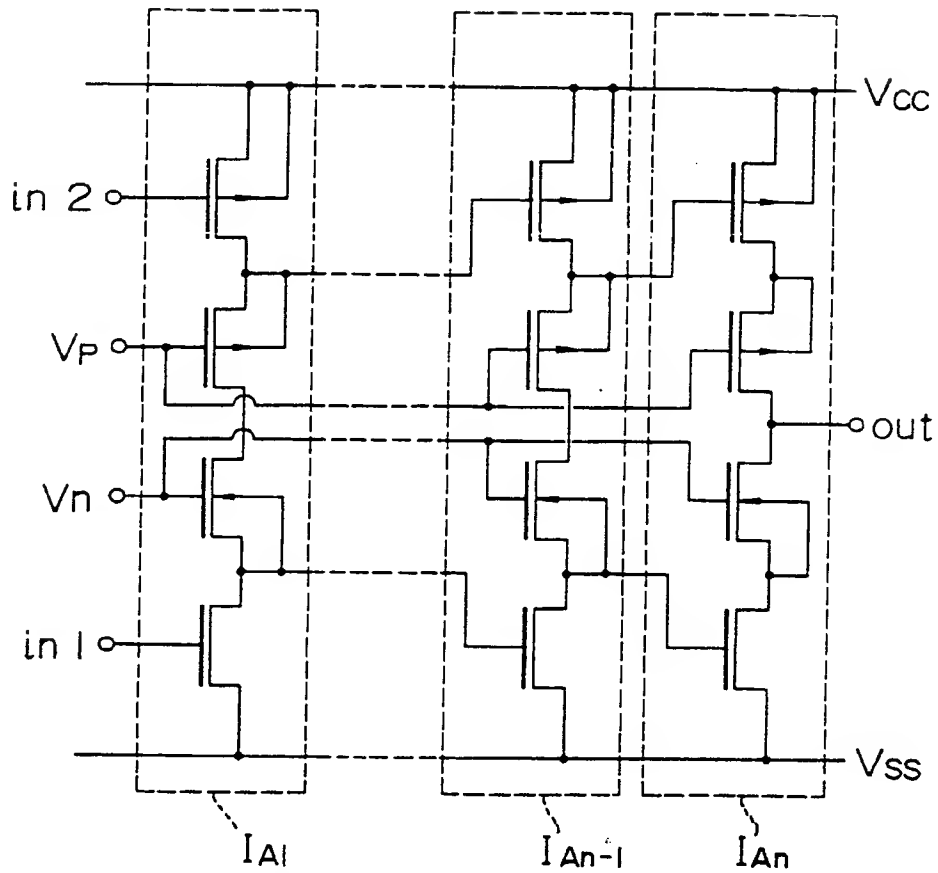


FIG. 21B

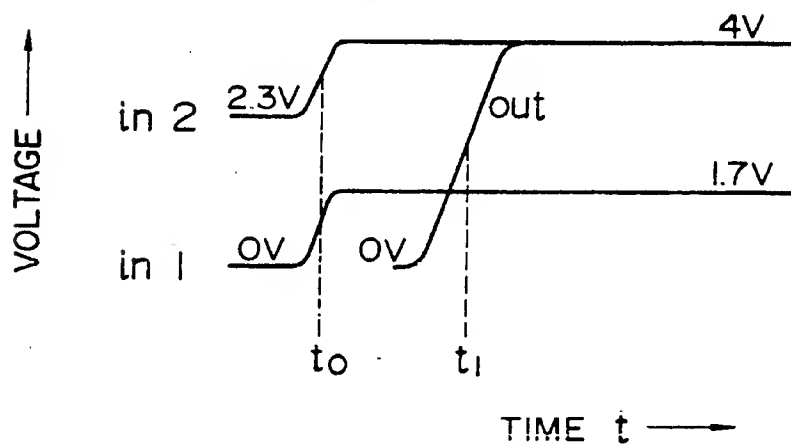


FIG. 22A

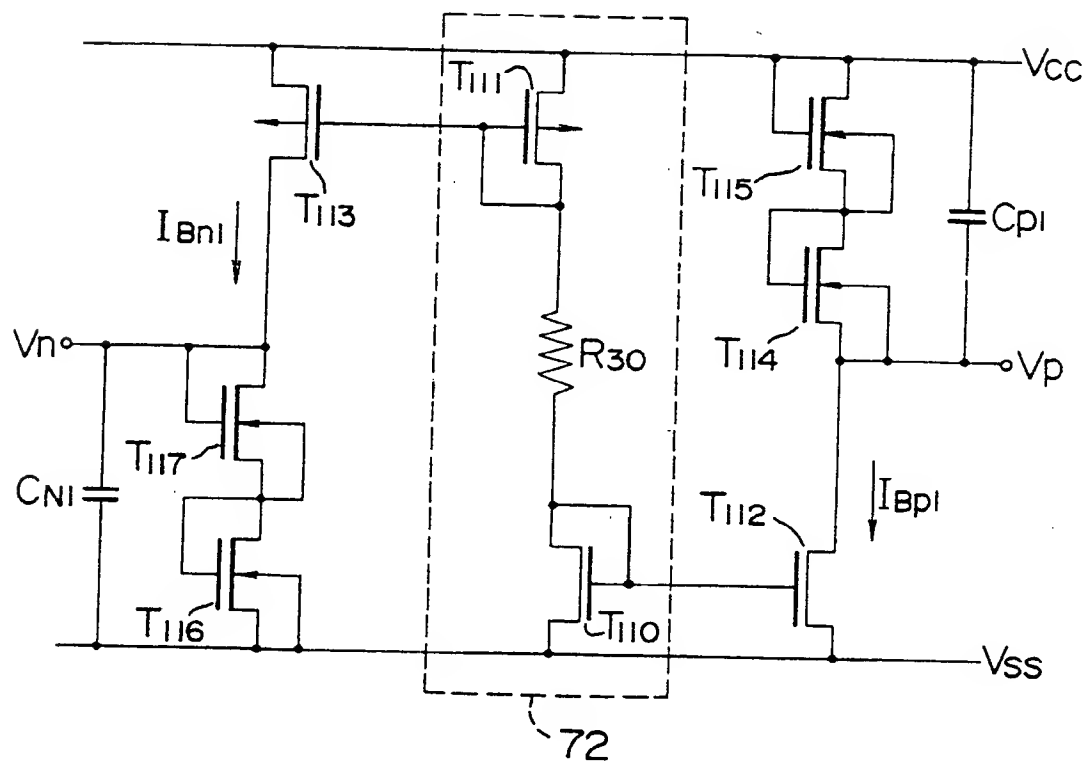


FIG. 22B

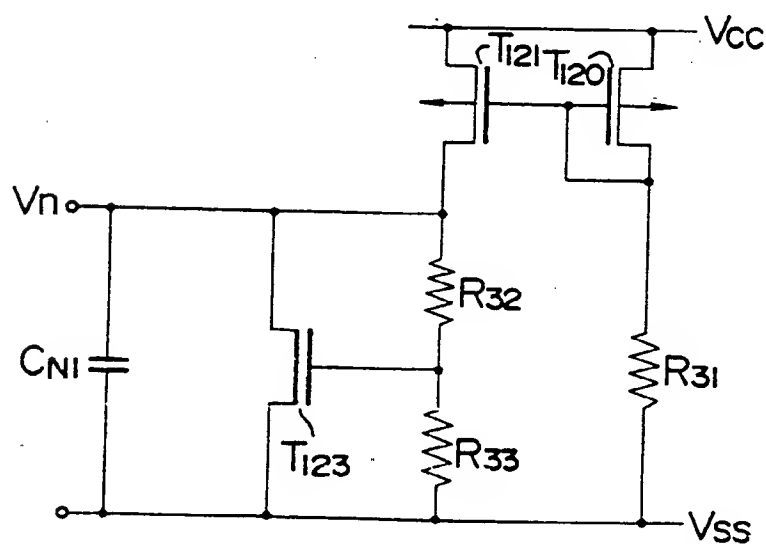


FIG. 23A

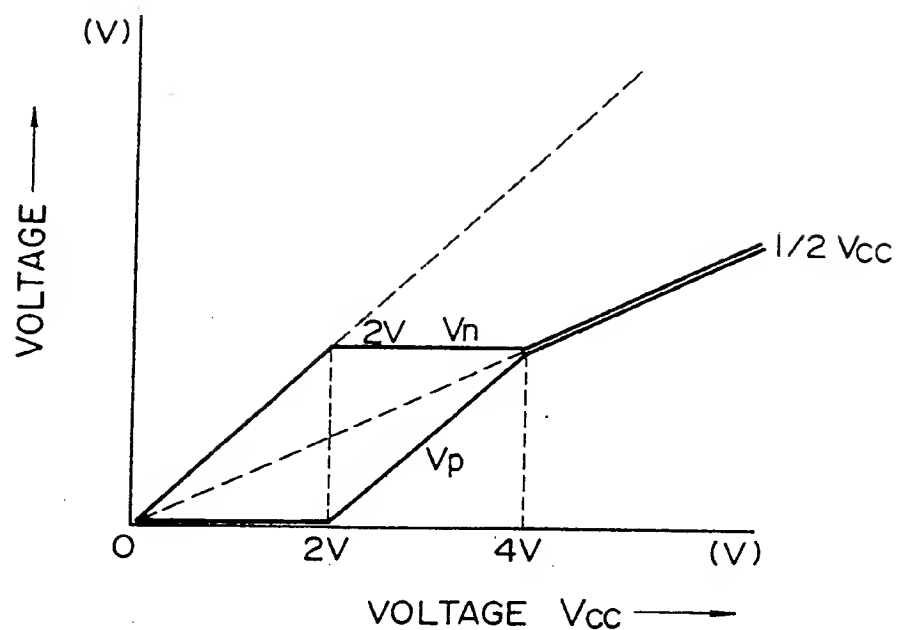
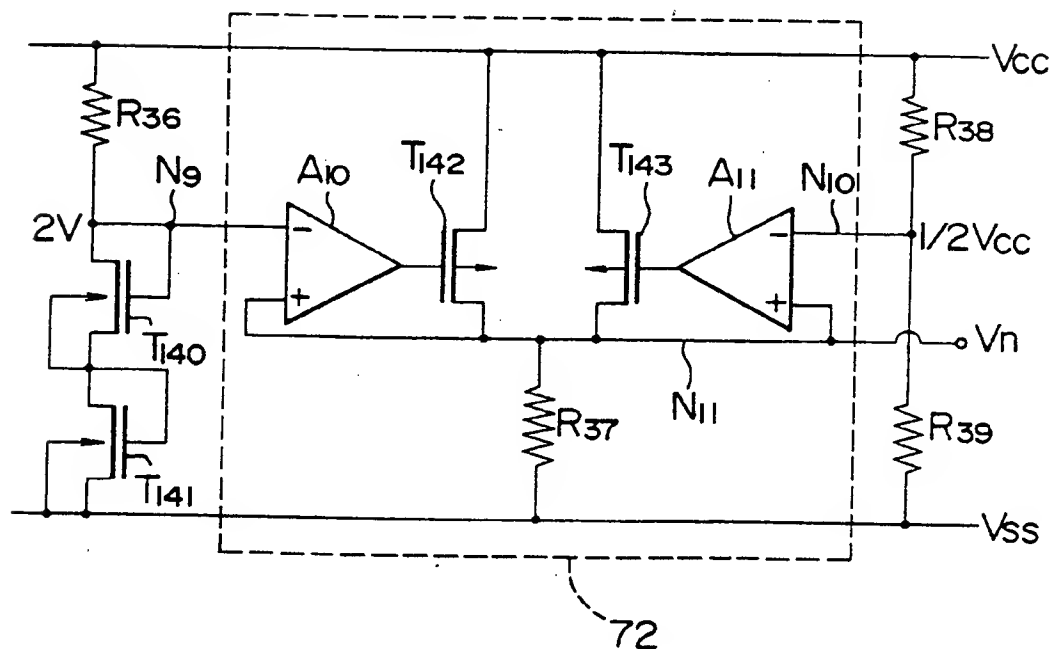


FIG. 23B



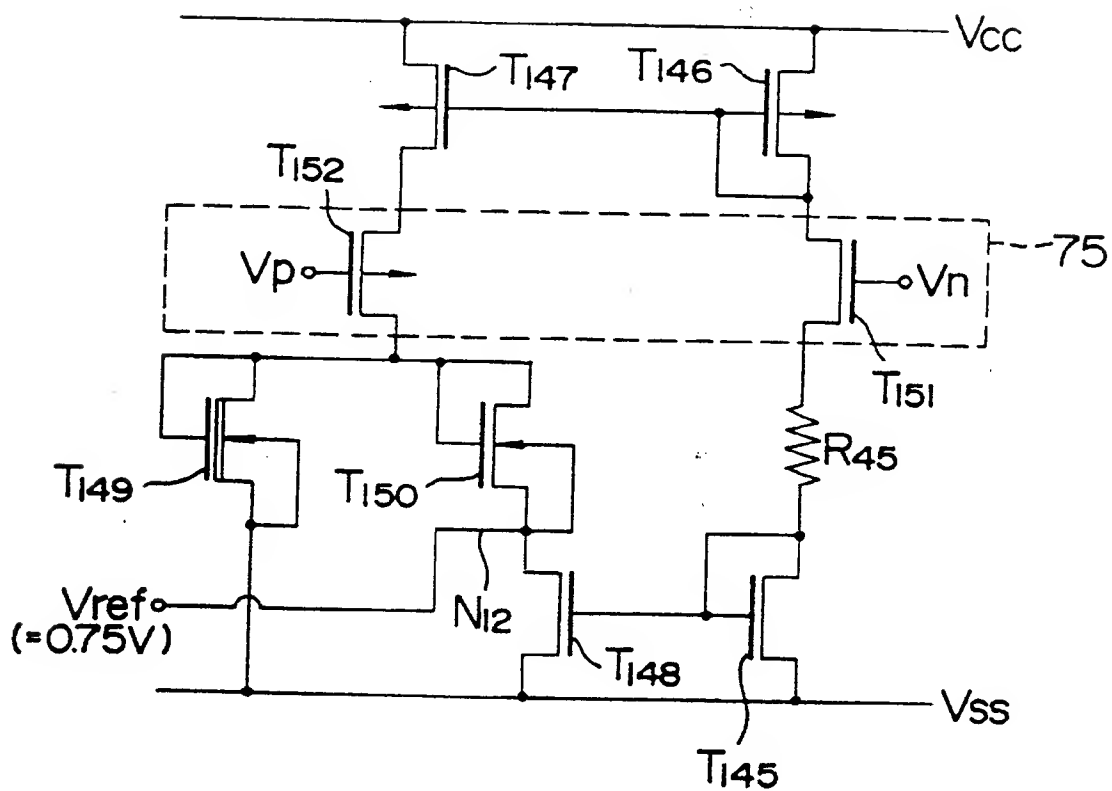
[illegible]

FIG. 25A

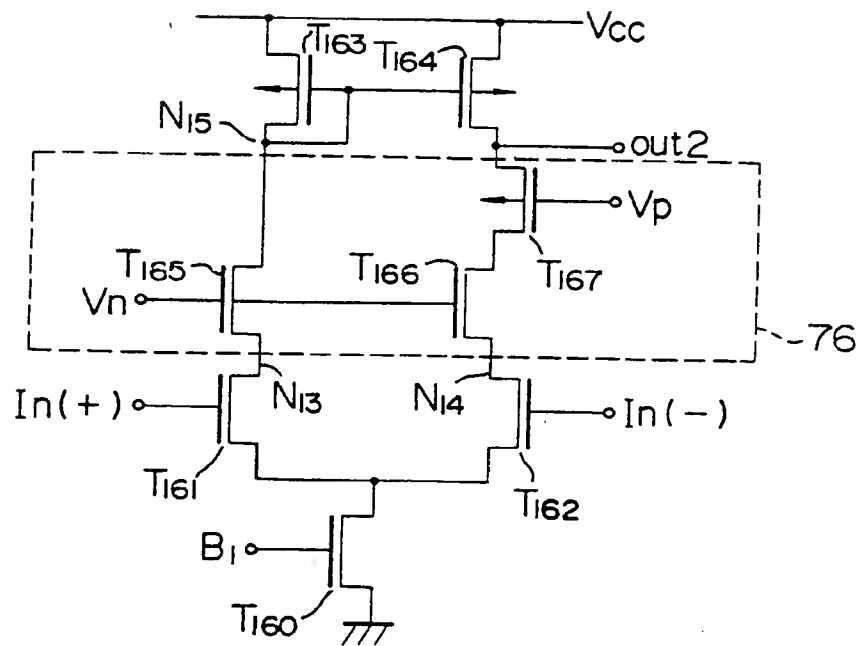


FIG. 25B

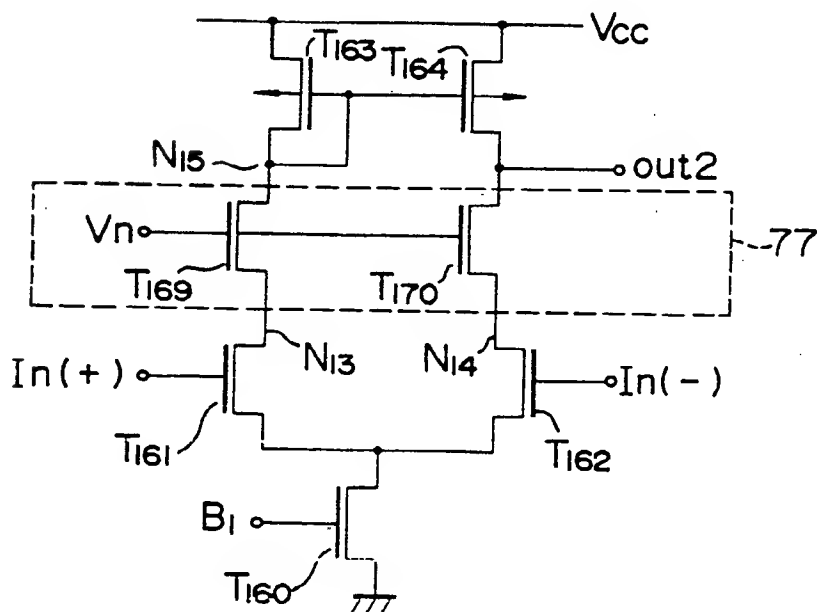




FIG. 26A

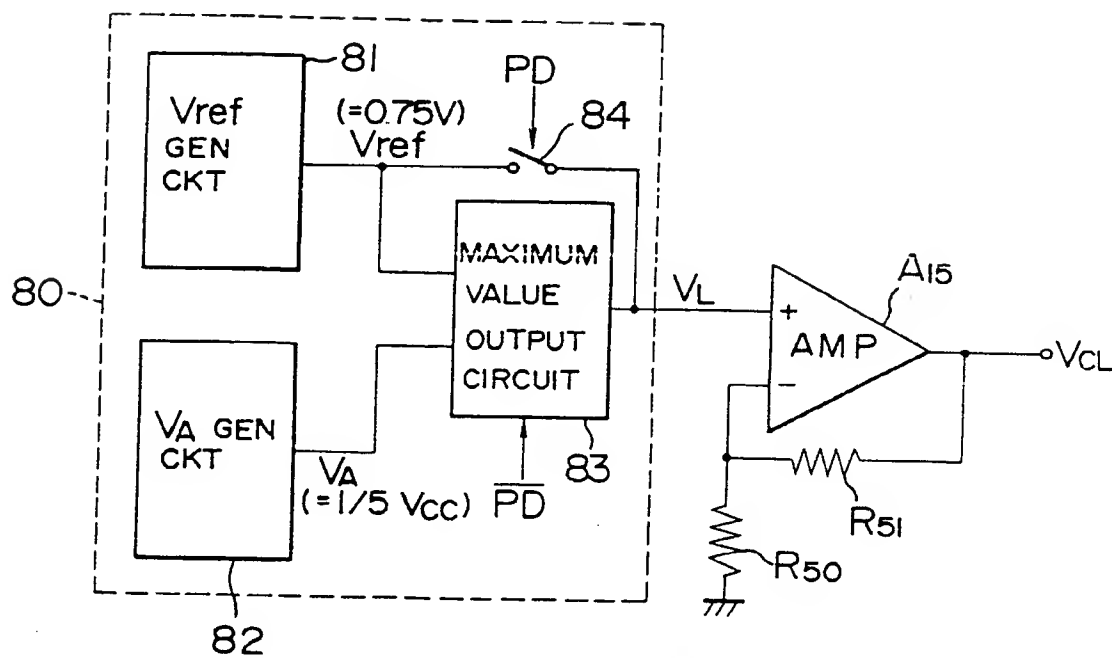
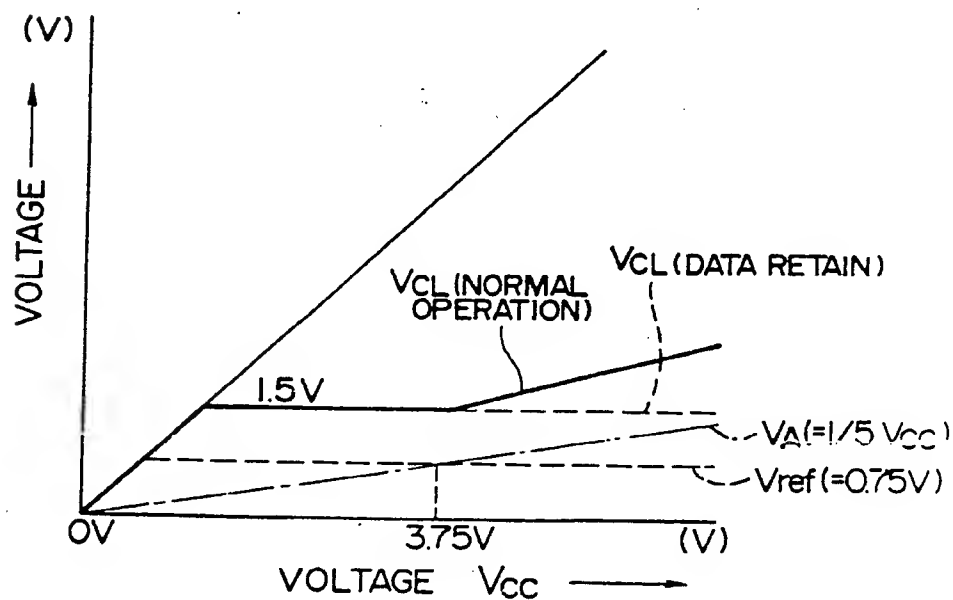
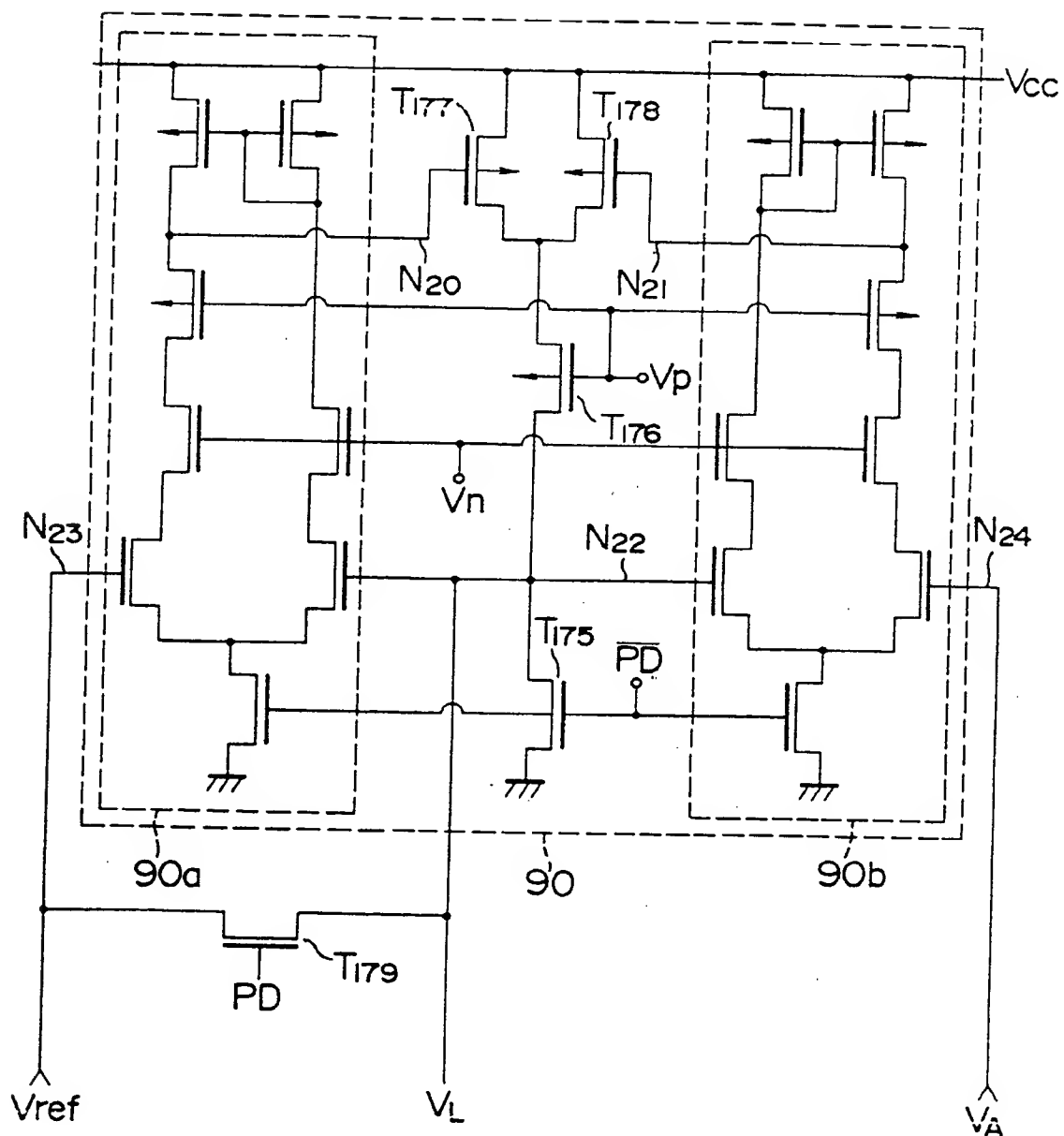


FIG. 26B



[illegible]

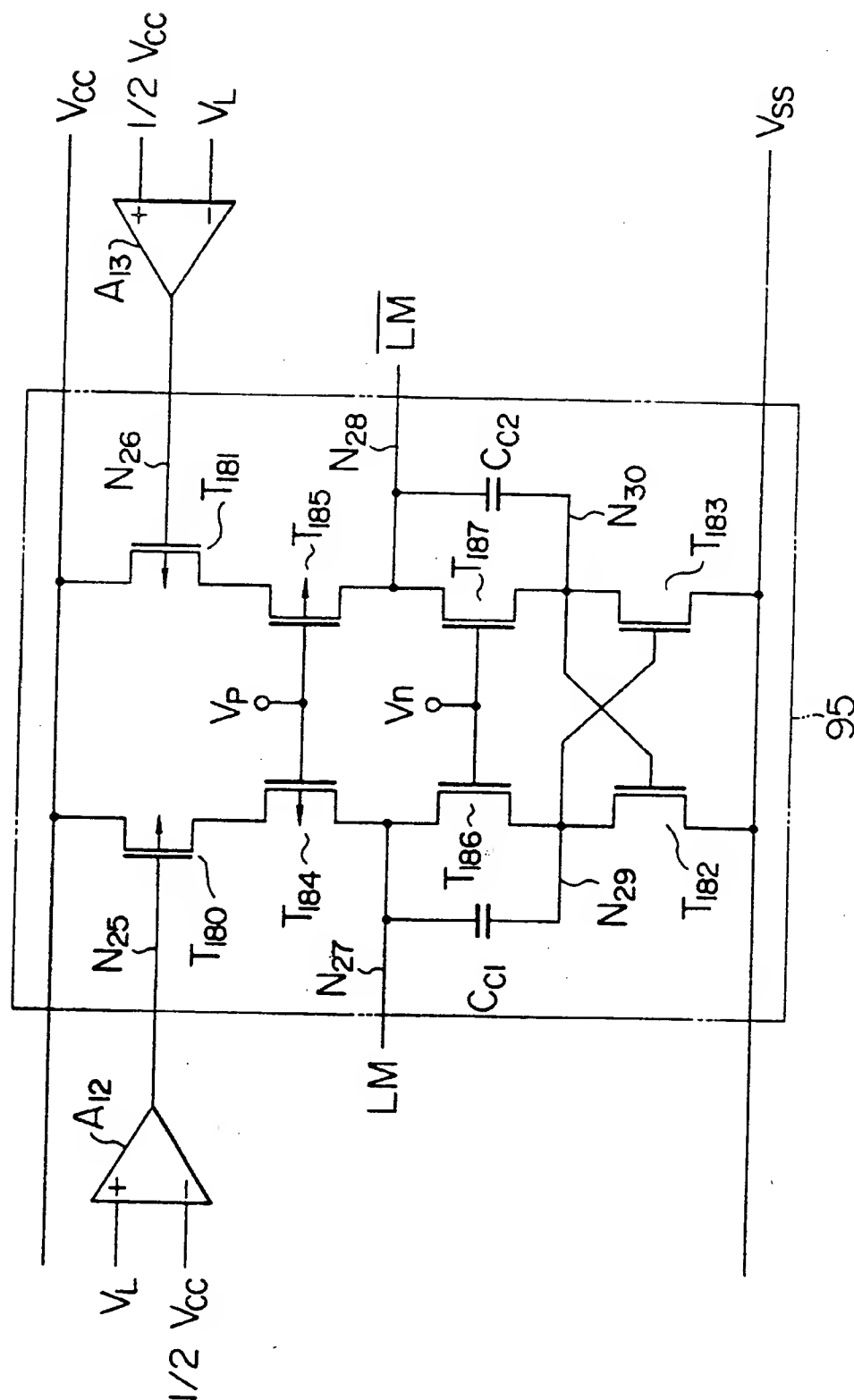


FIG. 27B

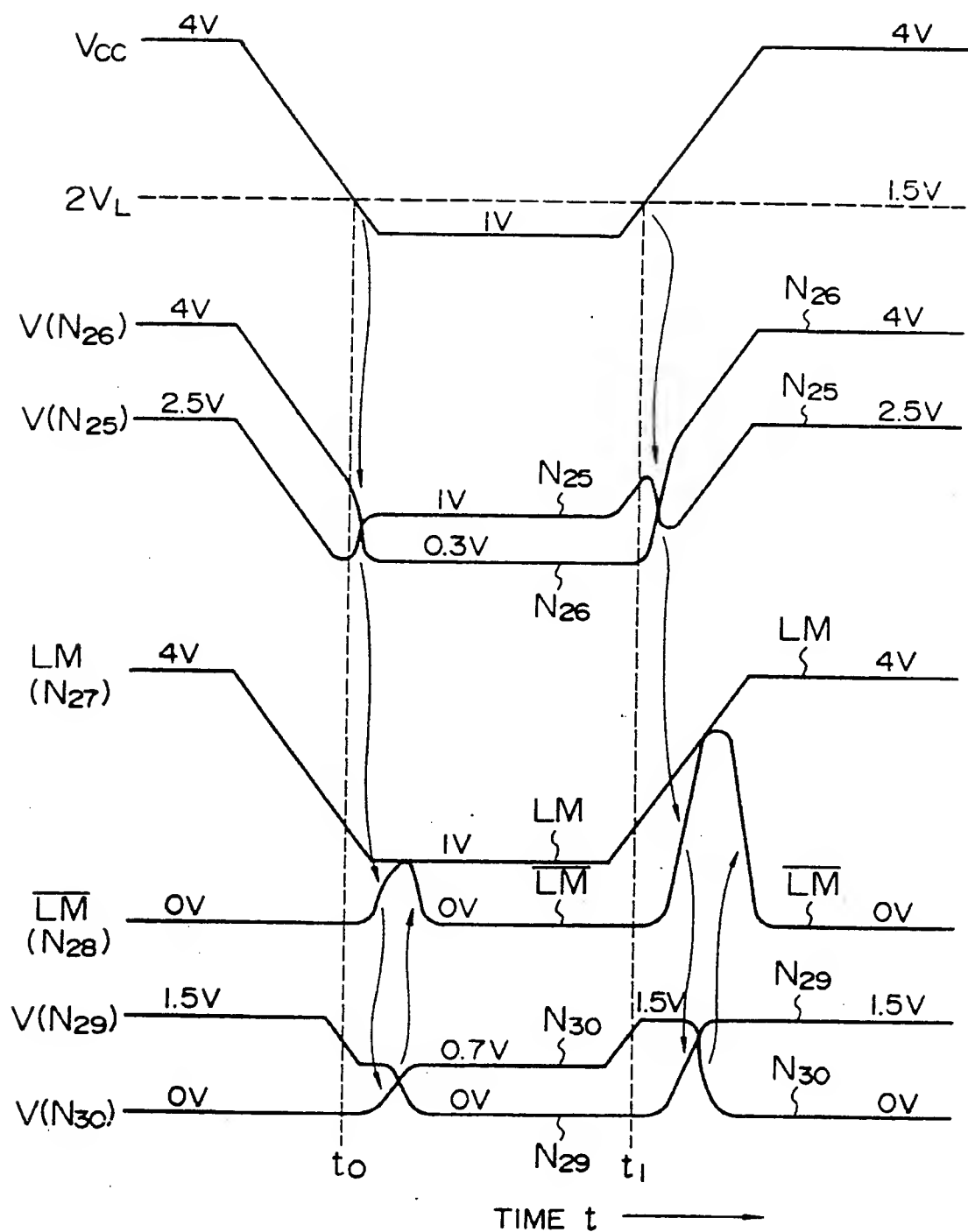


FIG. 28A

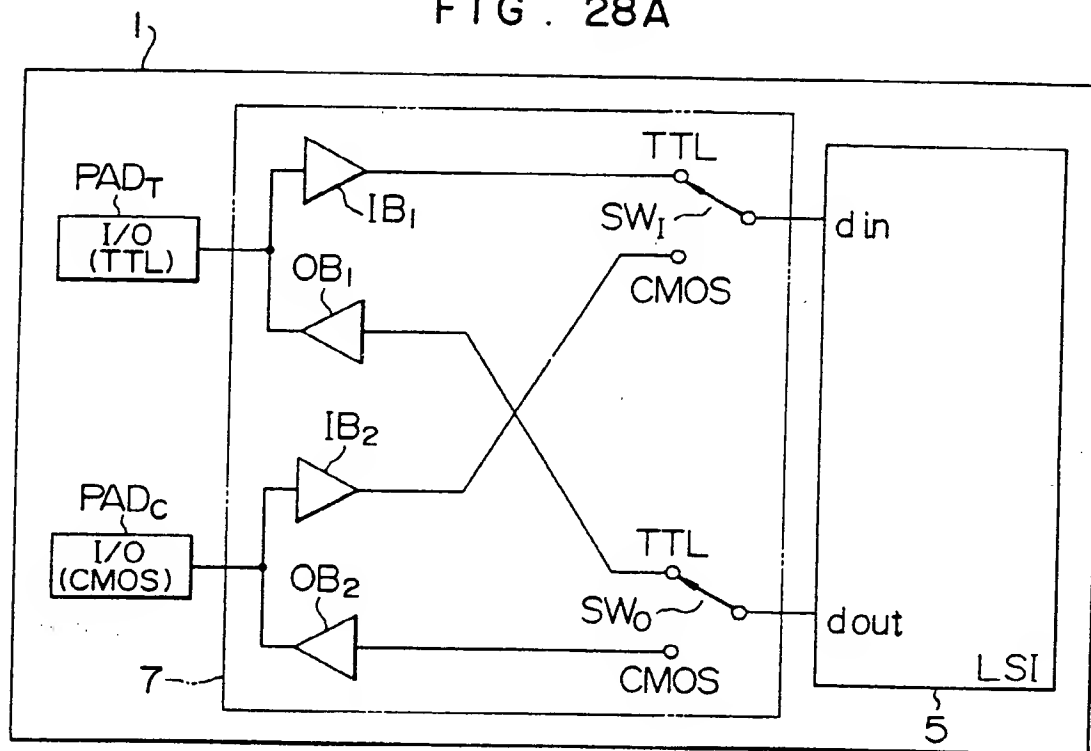


FIG. 28B

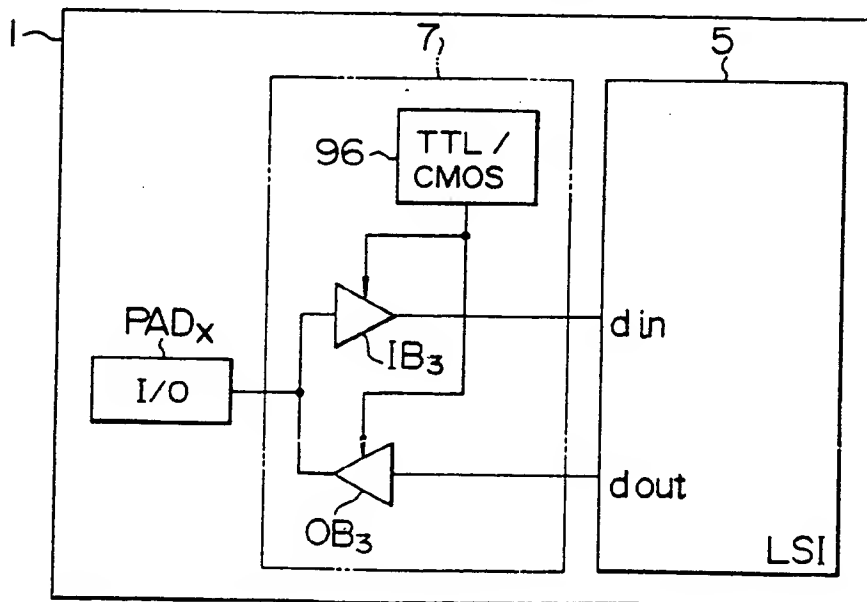
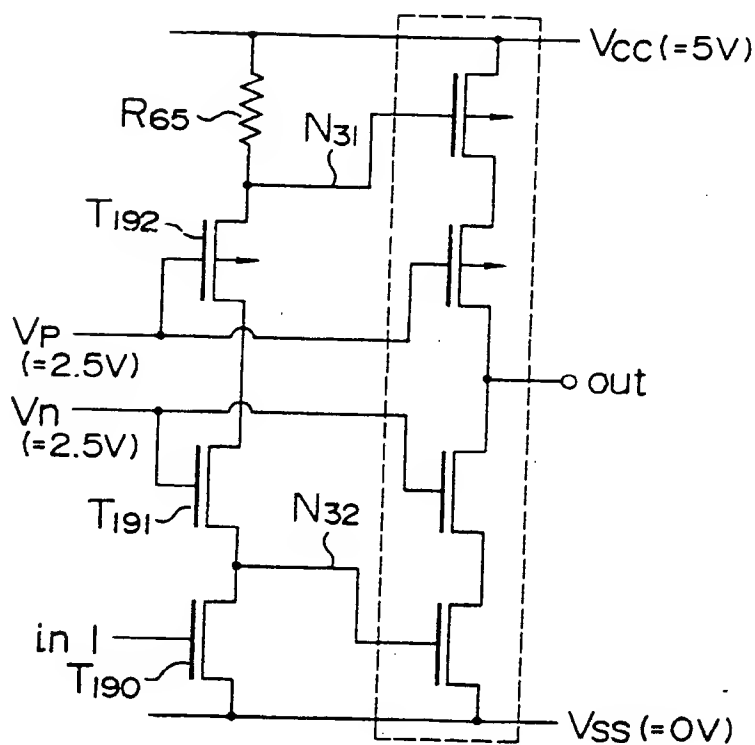
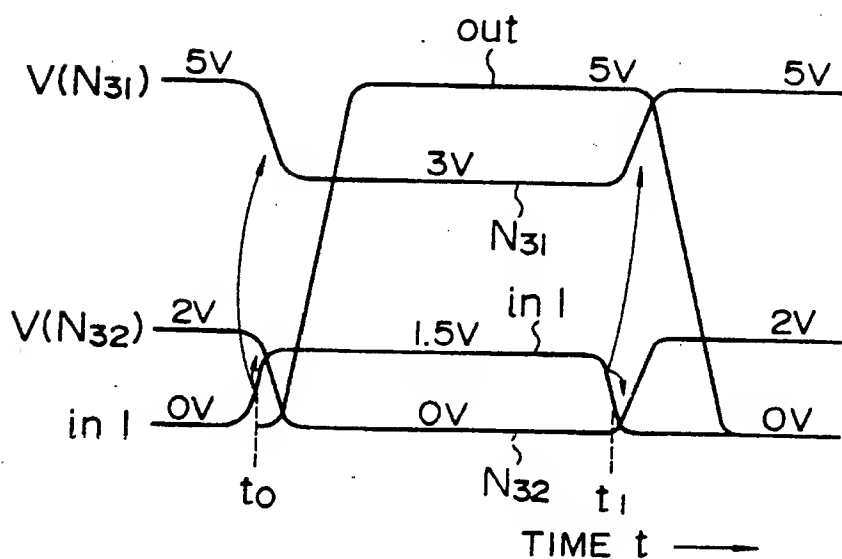


FIG. 29A



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FIG. 29B



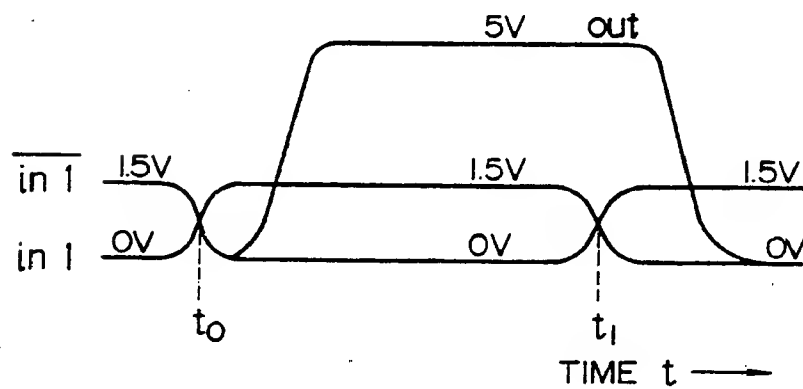
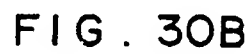
[illegible]

FIG. 3IA

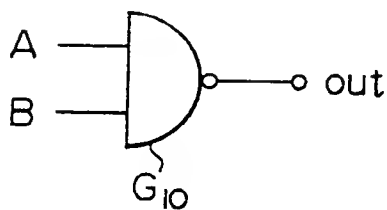


FIG. 3IB

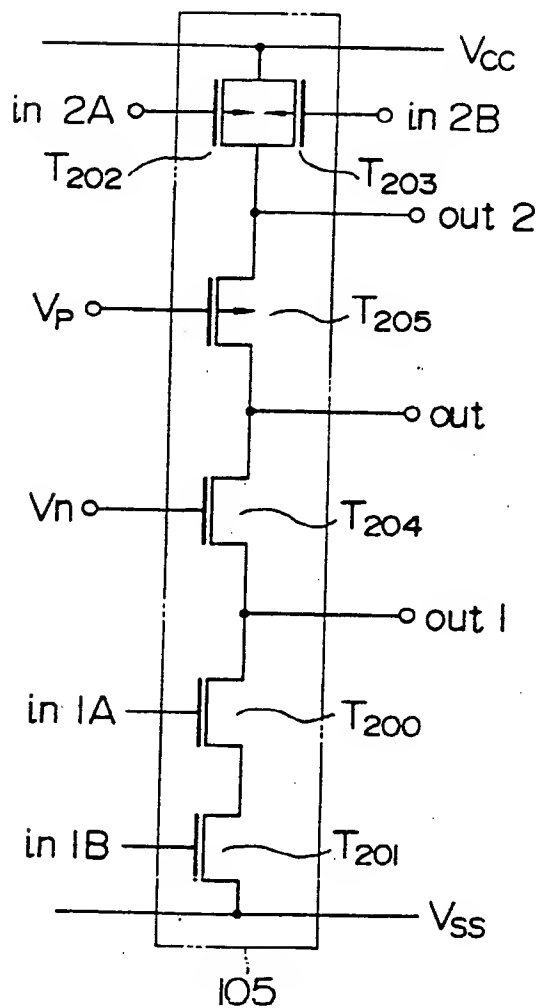




FIG. 32A

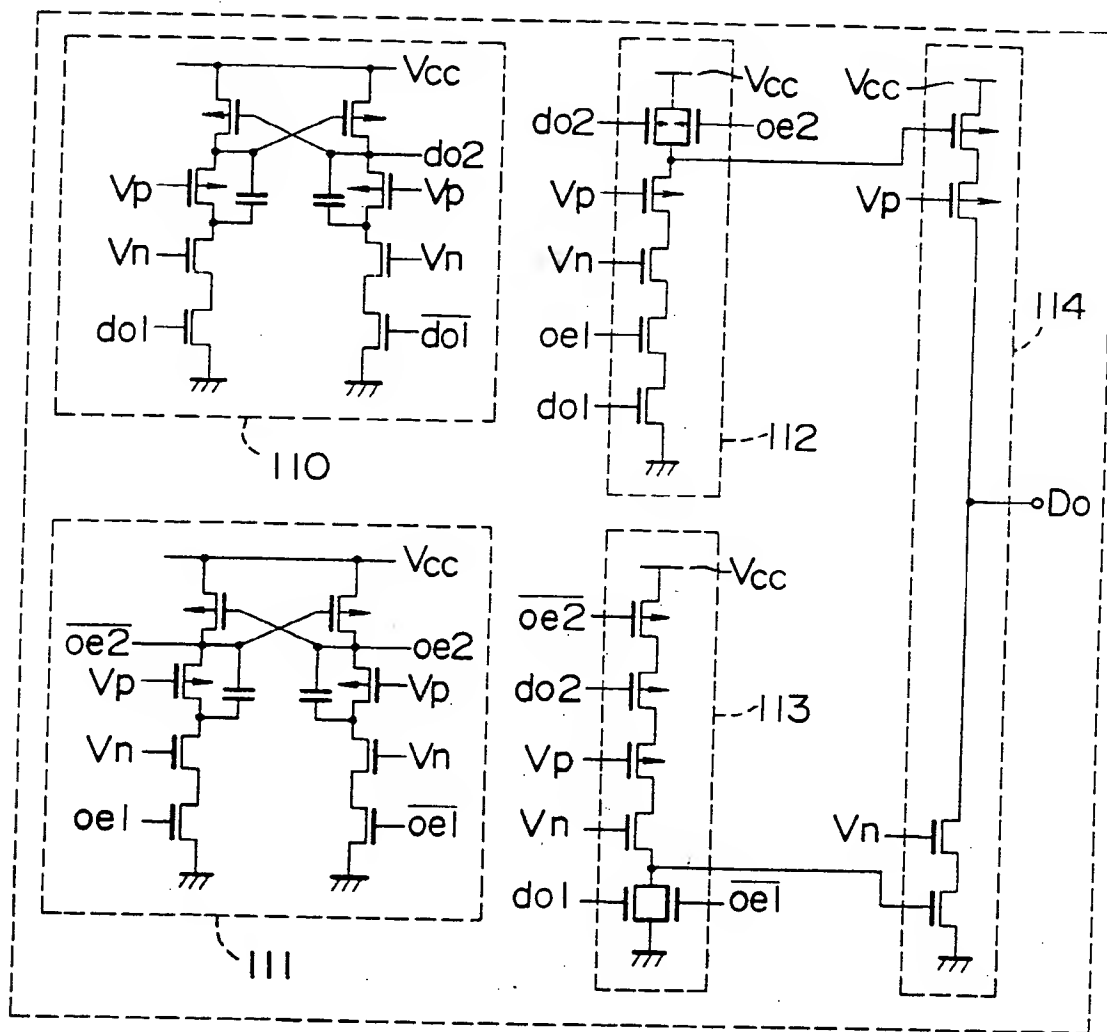


FIG. 32B

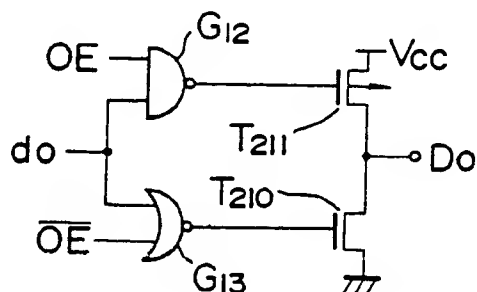


FIG. 33

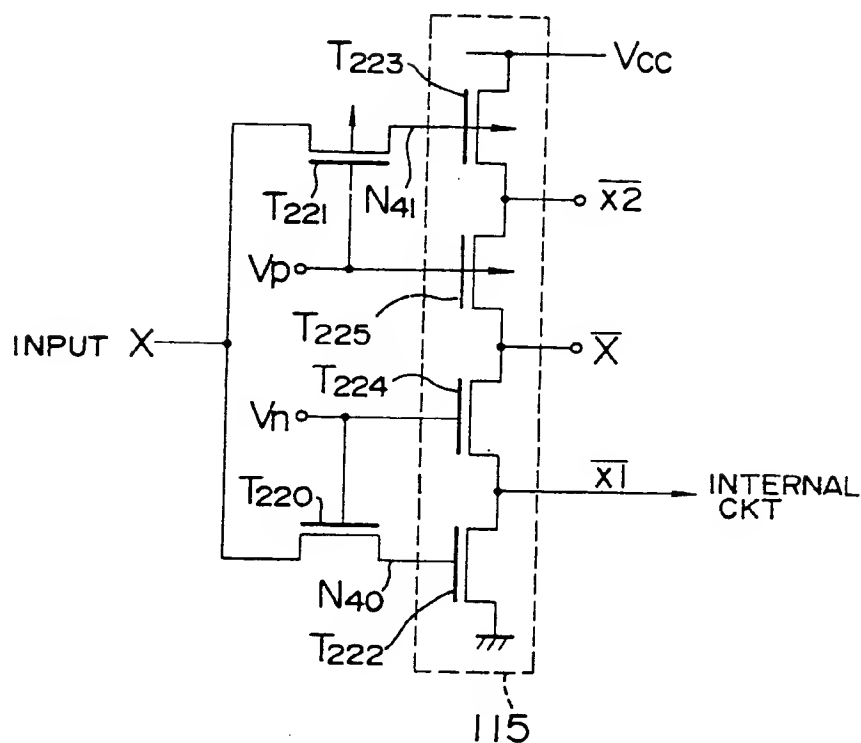


FIG. 34B

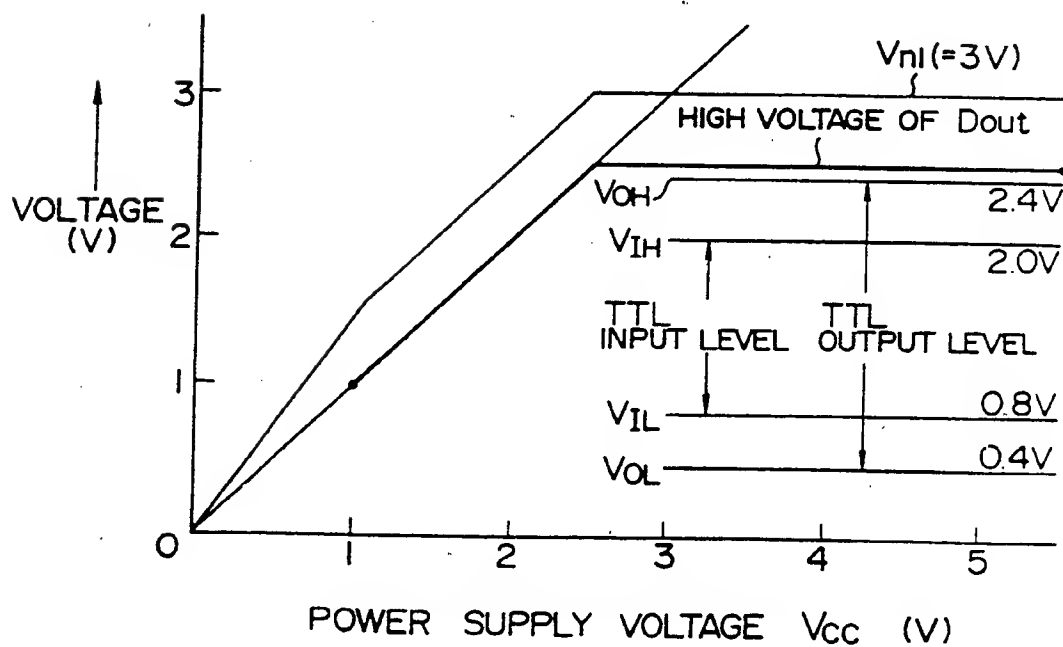


FIG. 34A

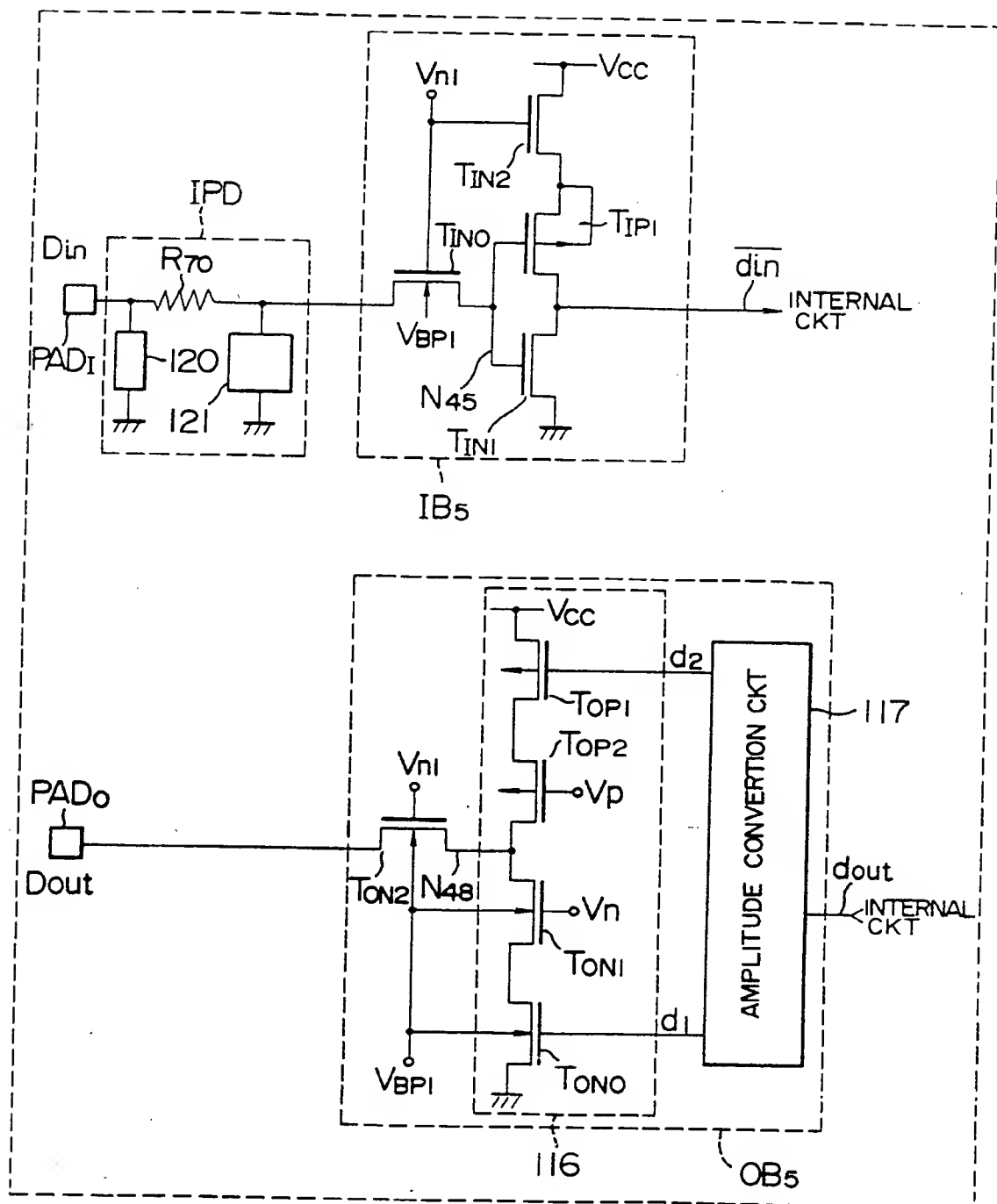


FIG. 35A

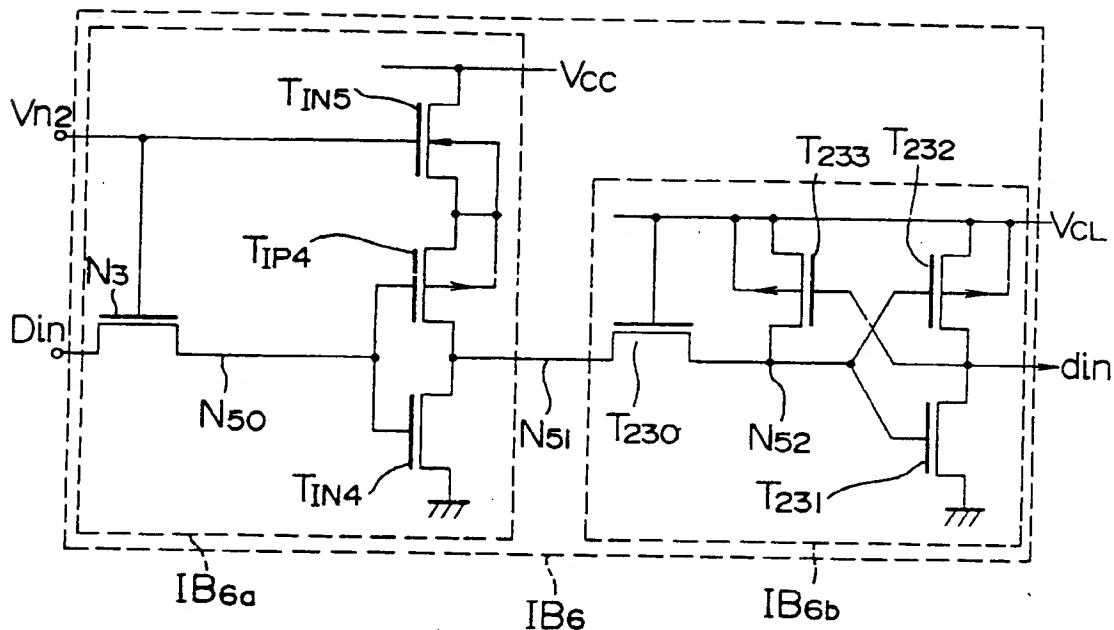


FIG. 35B

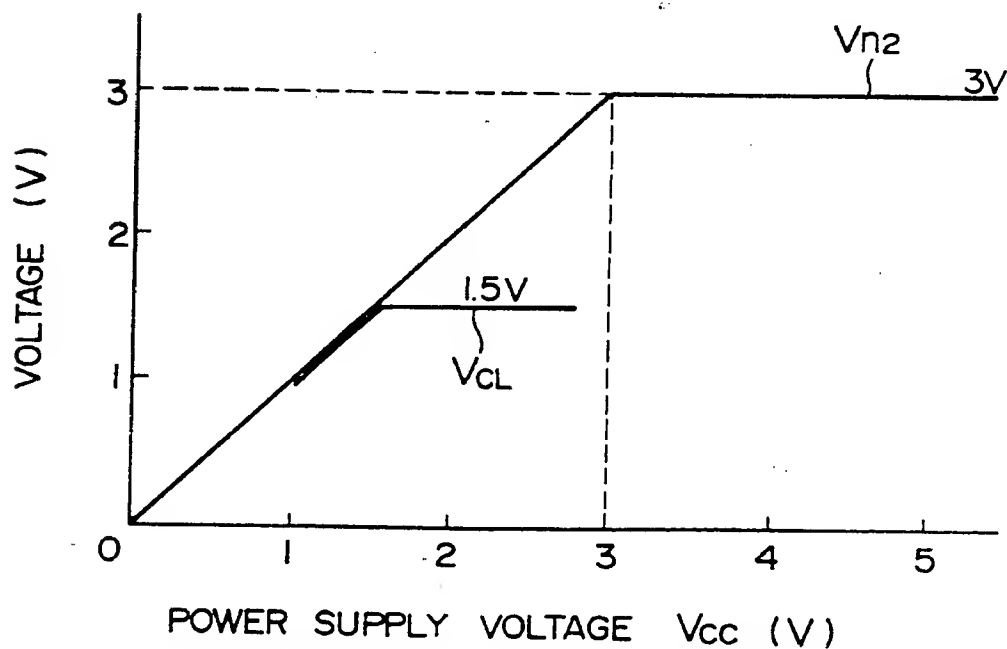


FIG. 35C

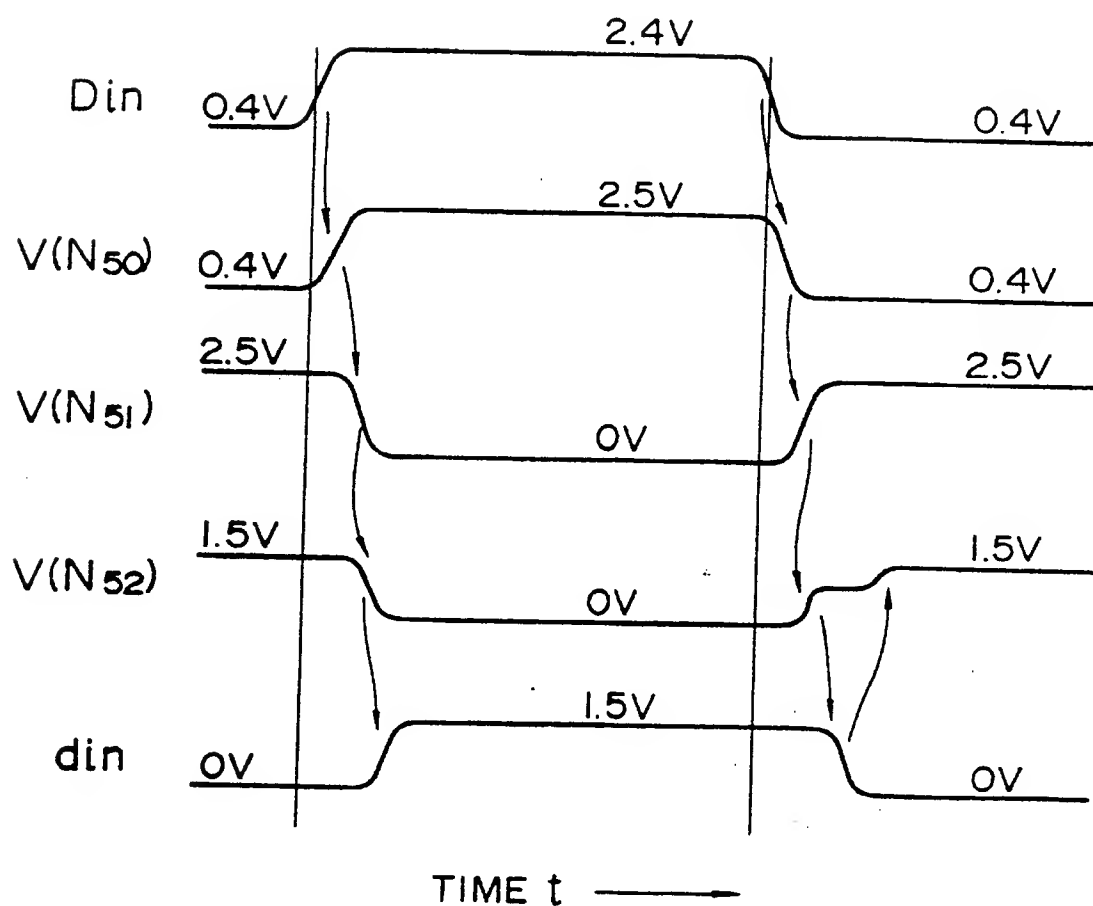
 $V_{CC} = 5V$  $V_{CL} = 1.5V$

FIG. 35D

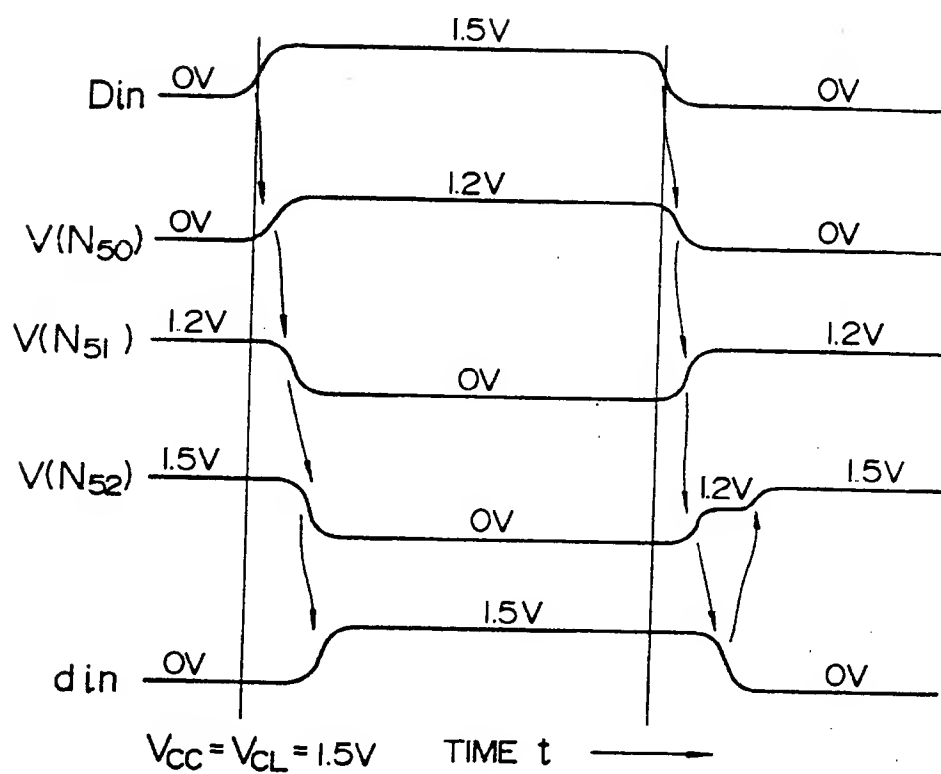


FIG. 36A

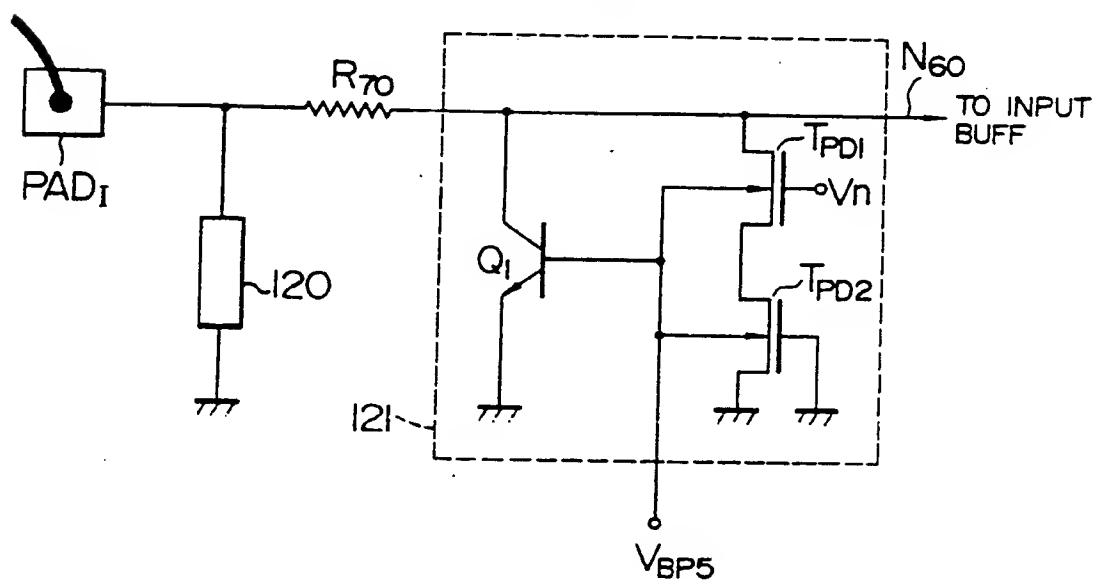


FIG. 36B

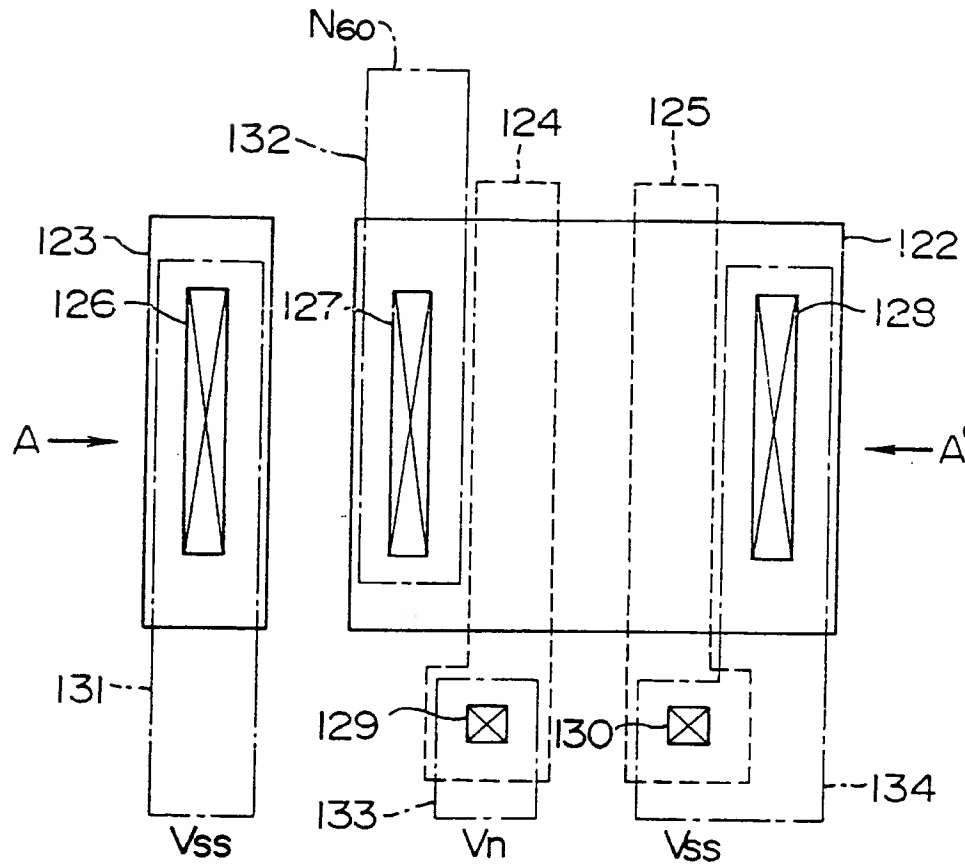
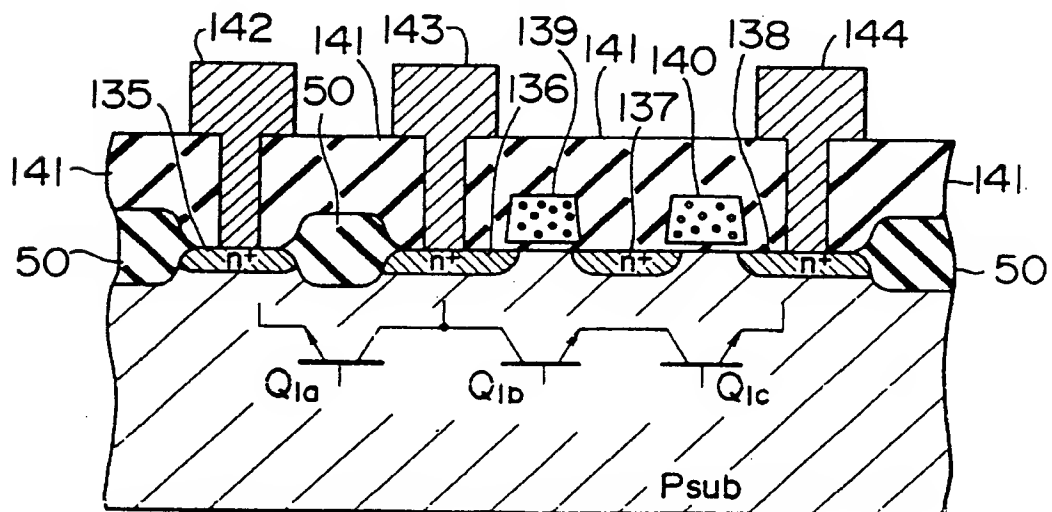


FIG. 36C



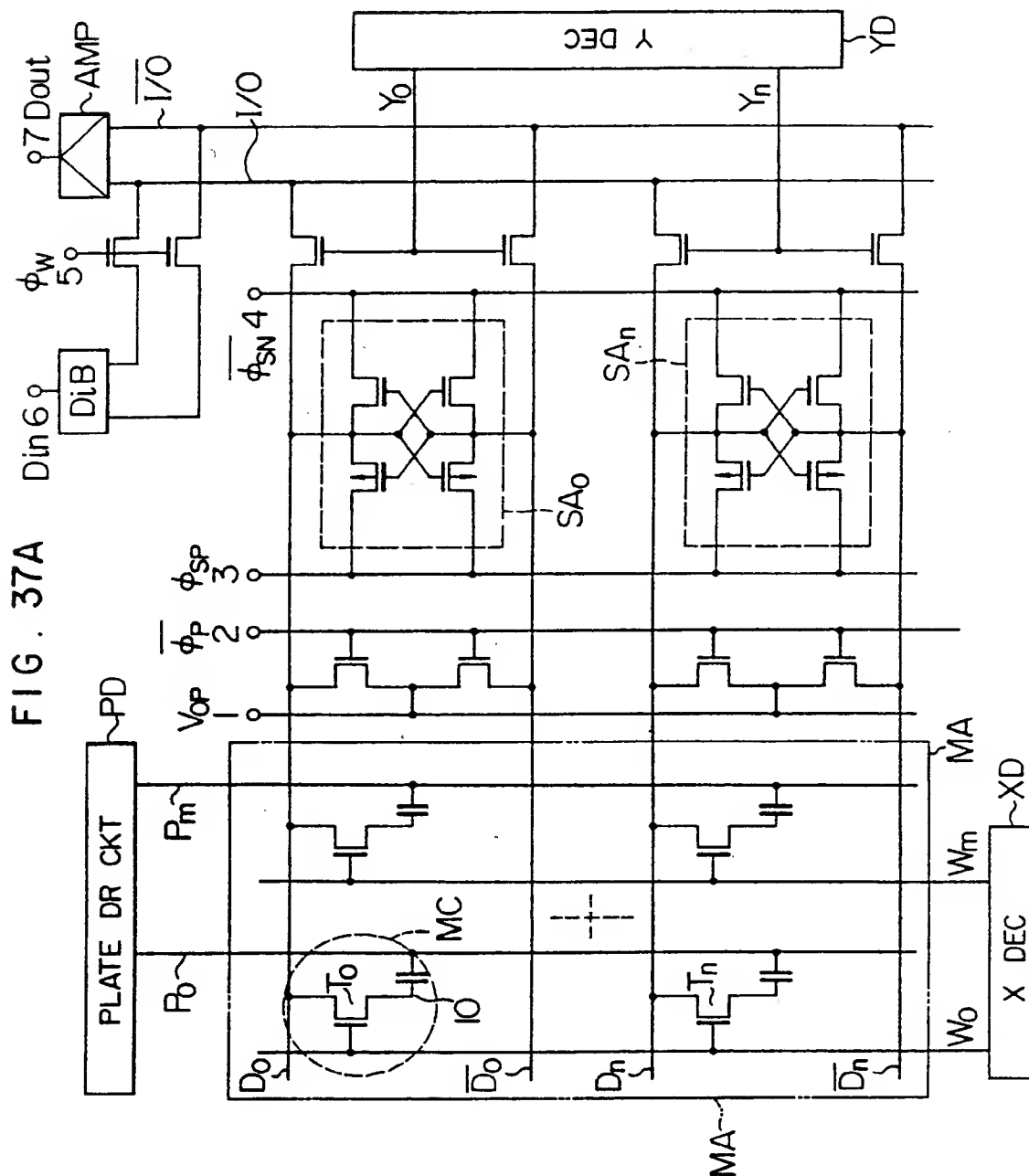




FIG. 37B

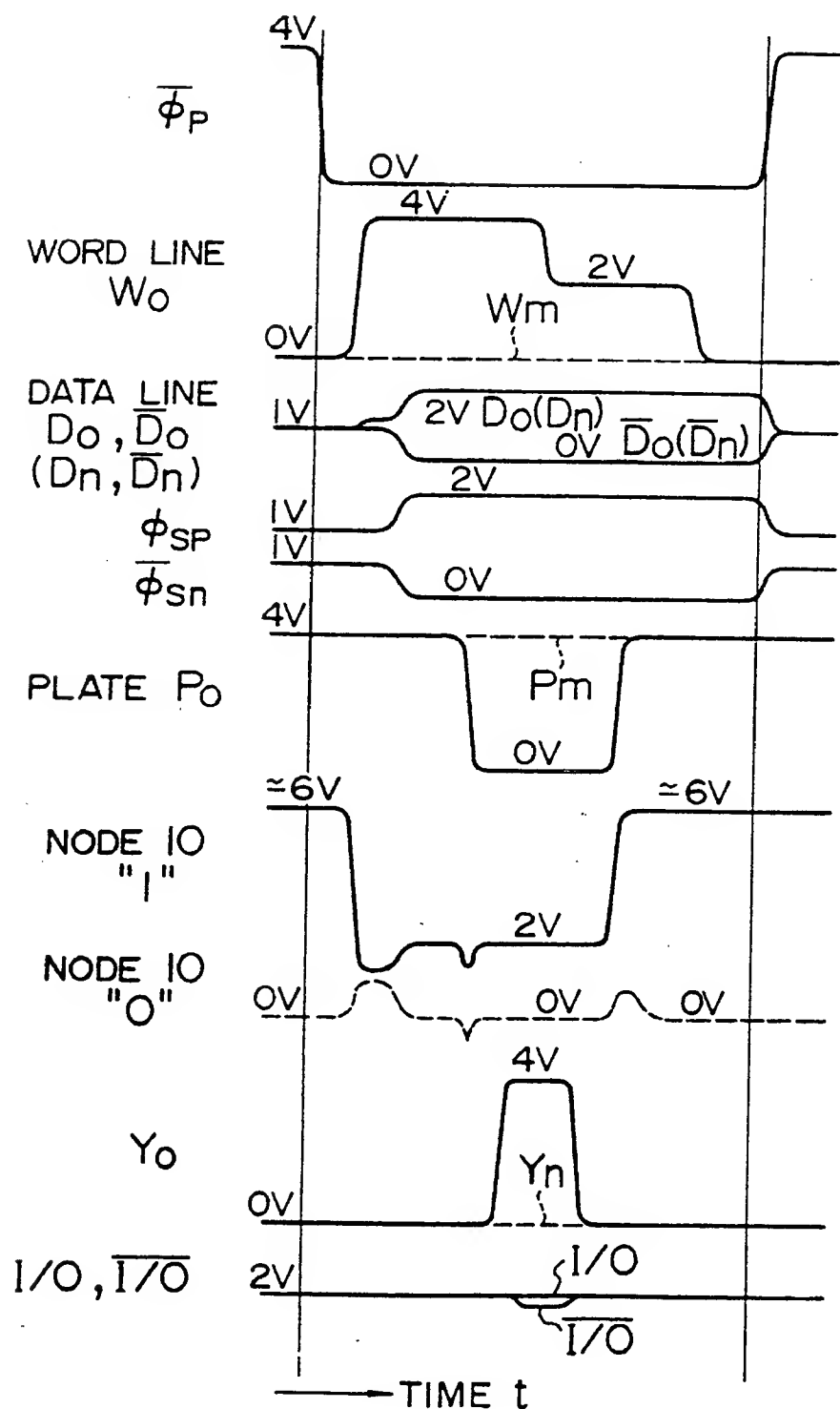


FIG. 37B

FIG. 37C

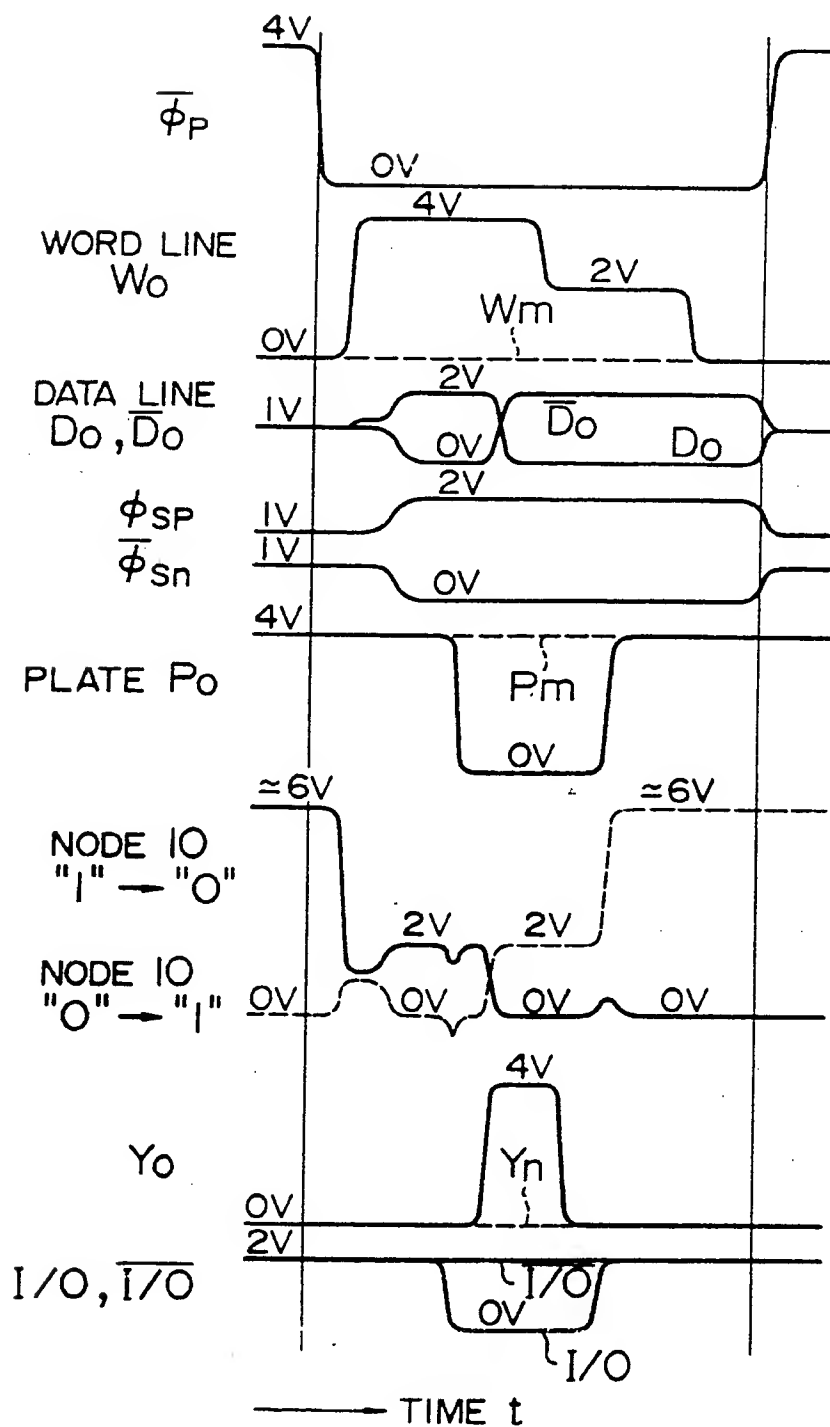


FIG. 37D

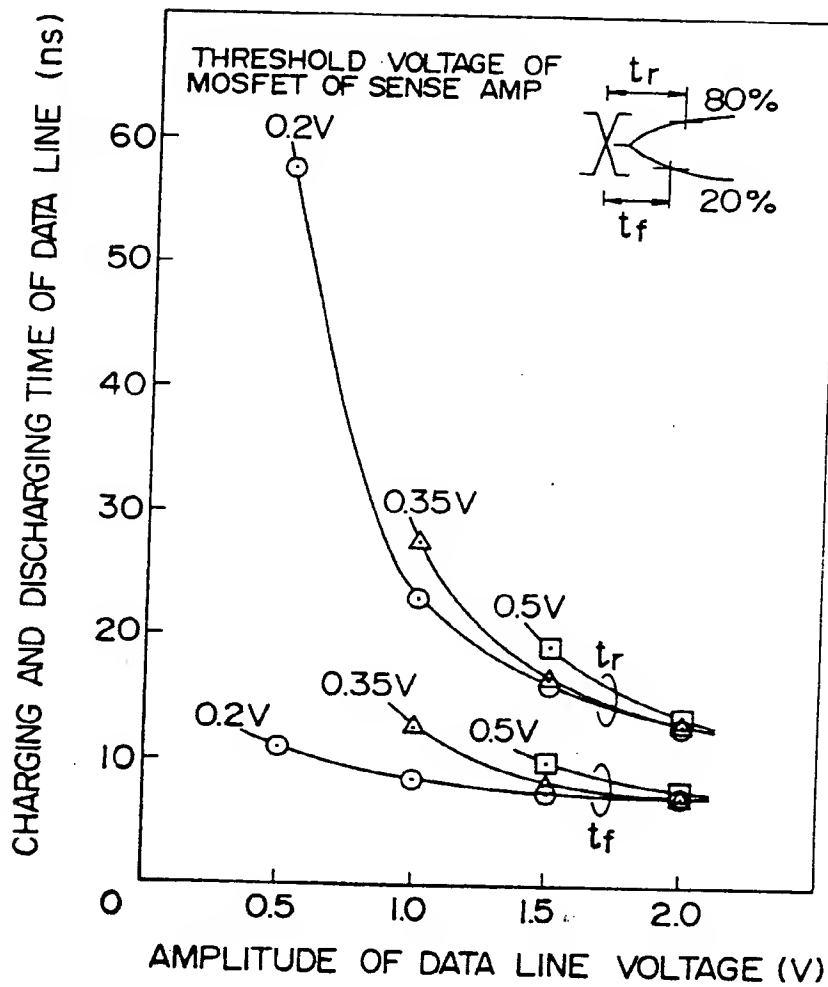


FIG. 37E

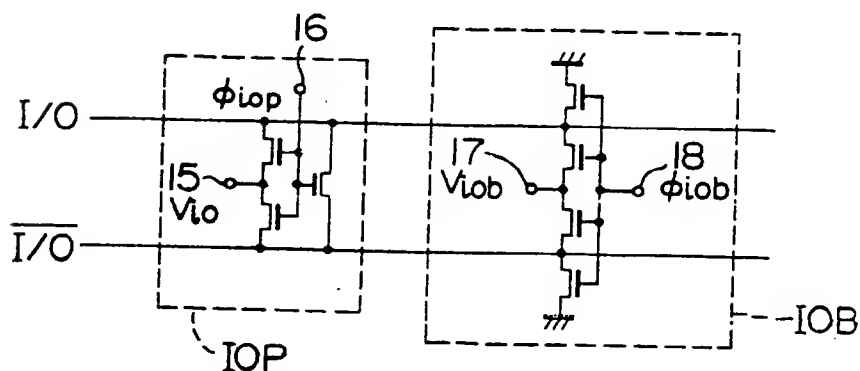
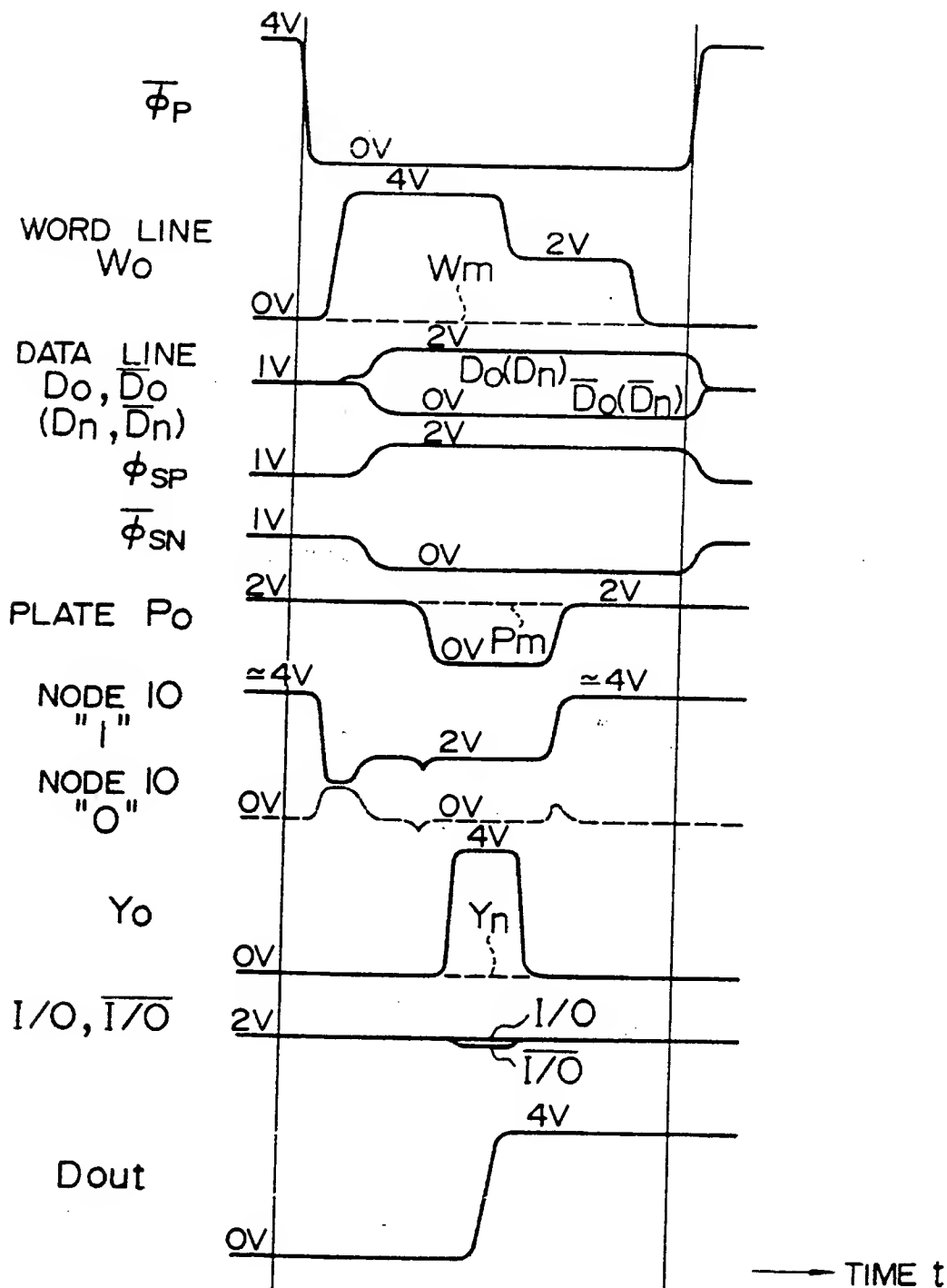


FIG. 38A



0564338 0564338

FIG. 38B

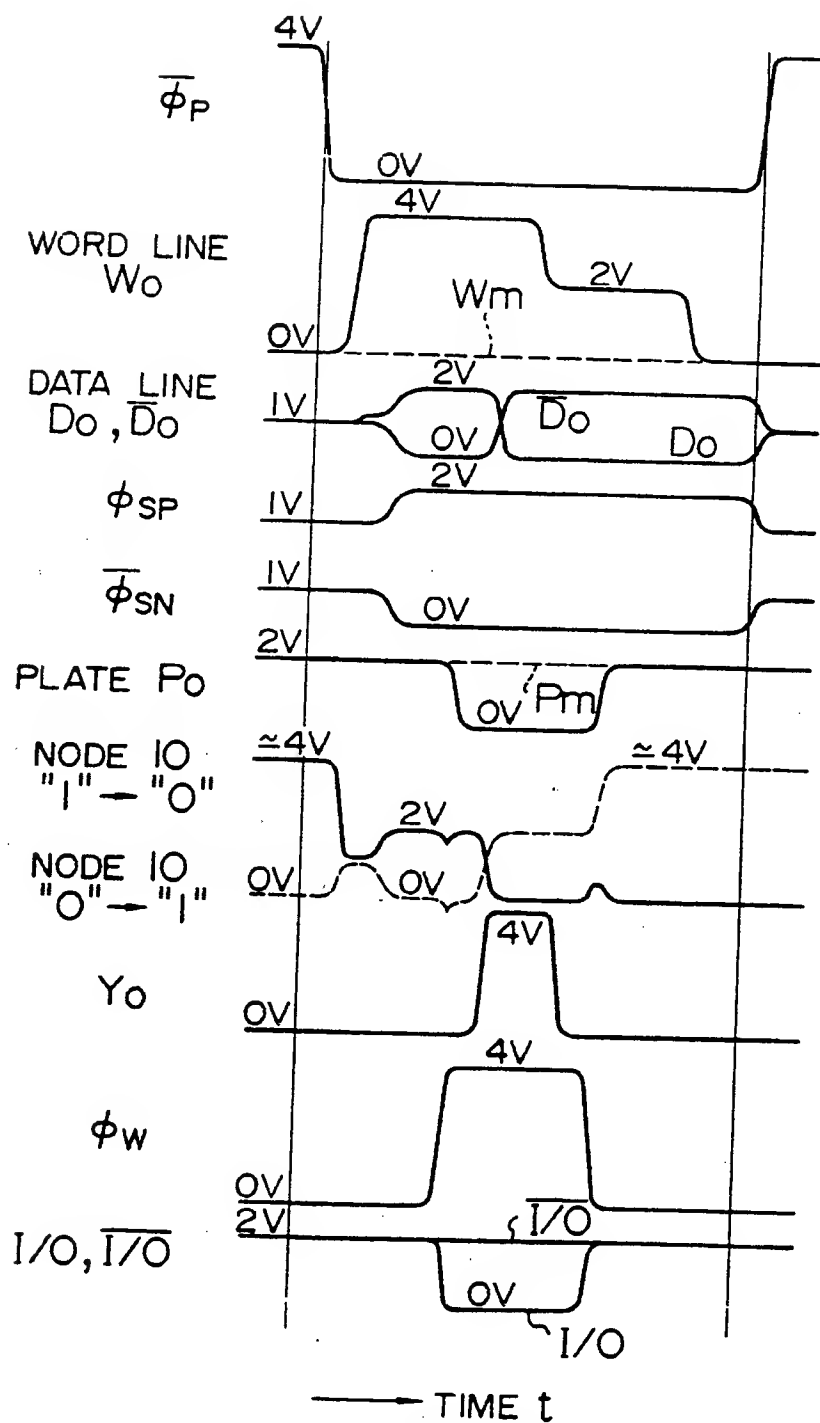


FIG. 39A

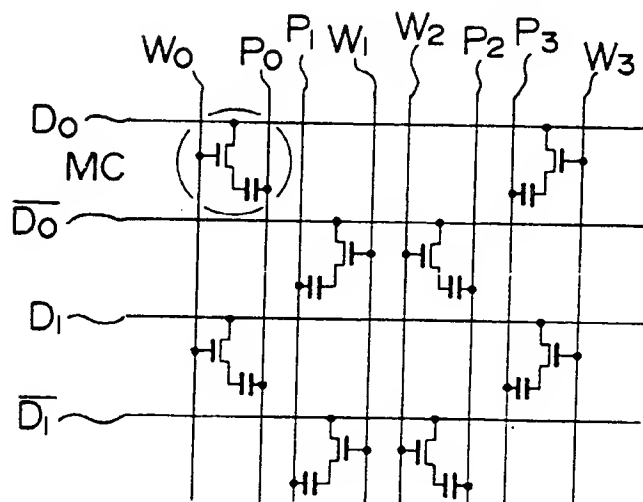


FIG. 39B

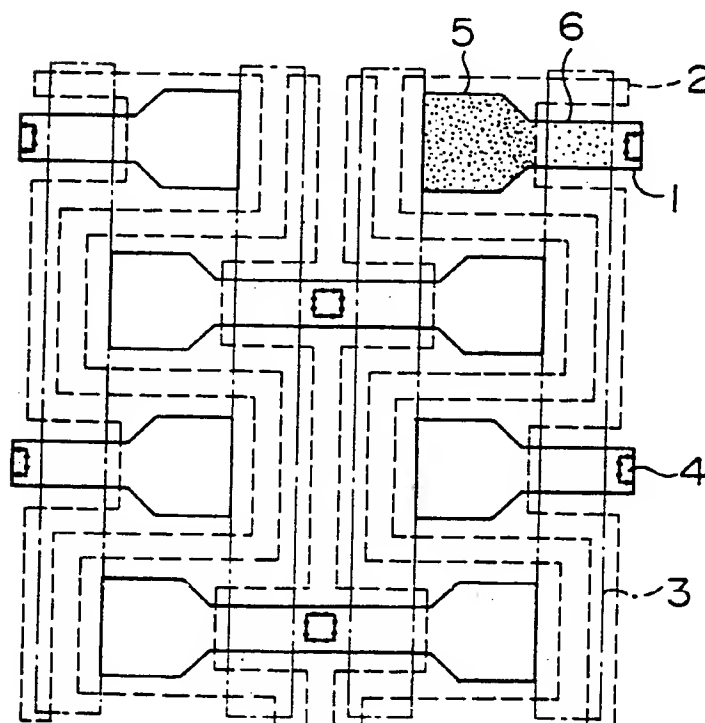


FIG. 40A

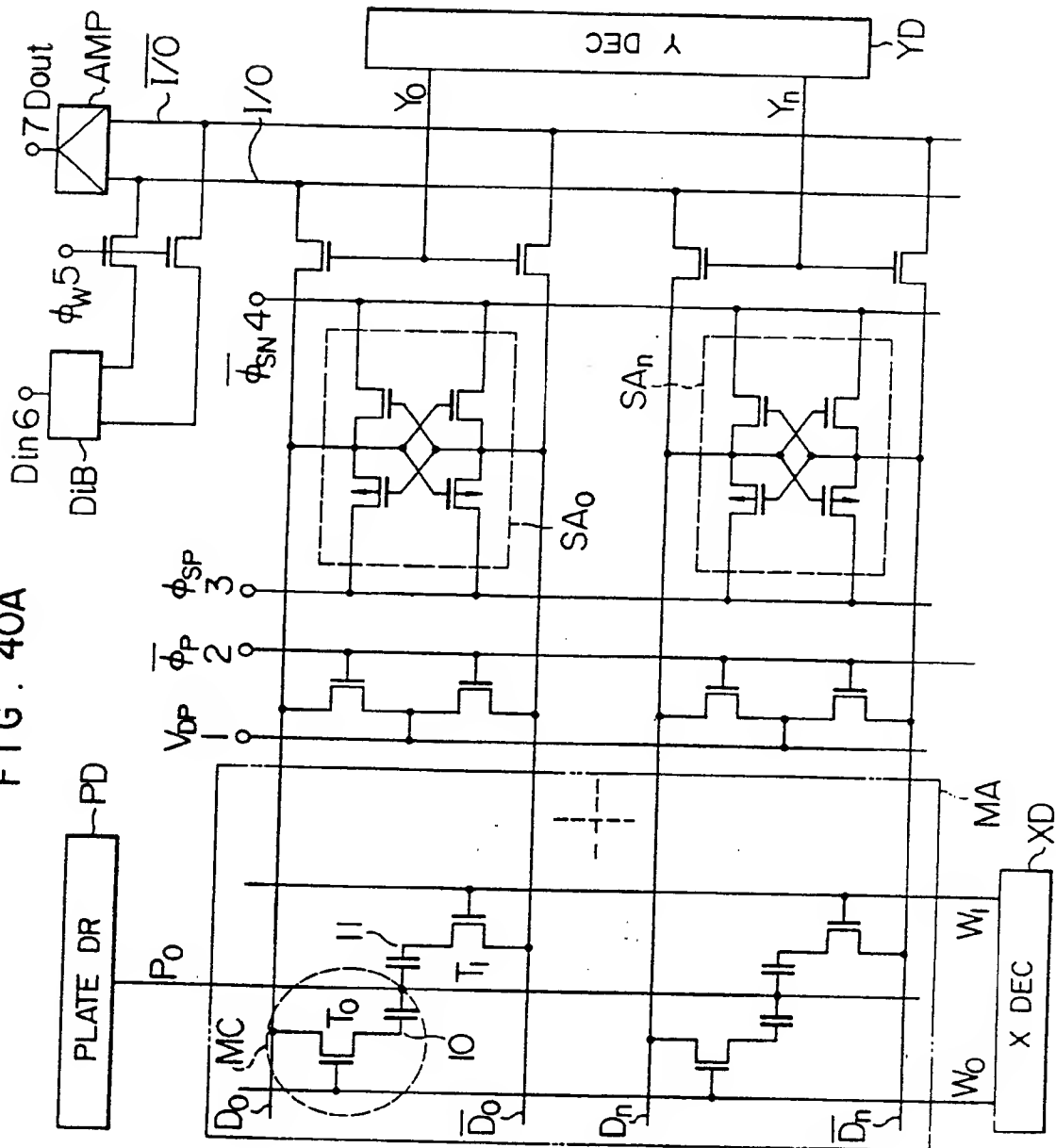


FIG. 40B

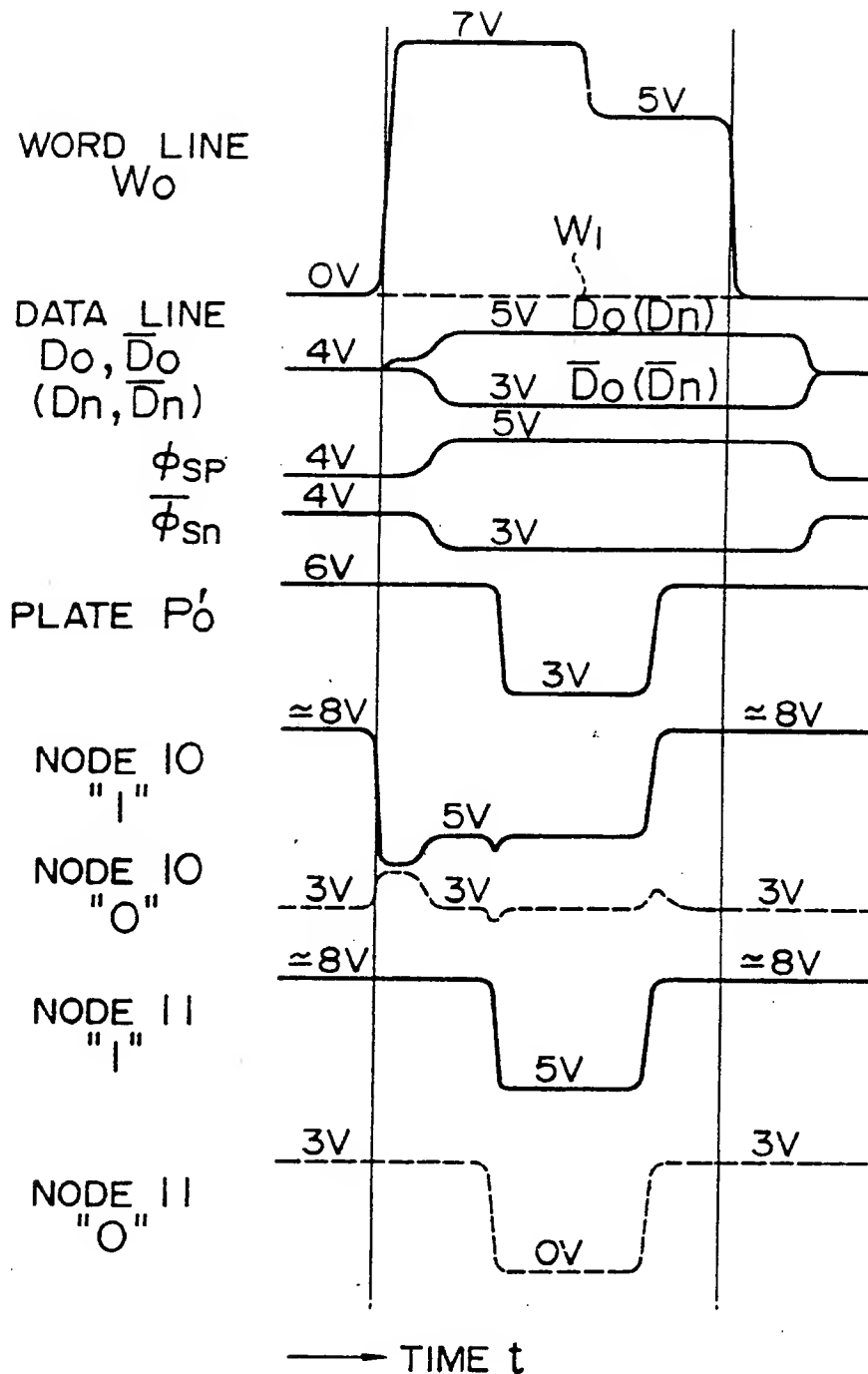


FIG. 40B



FIG. 40C

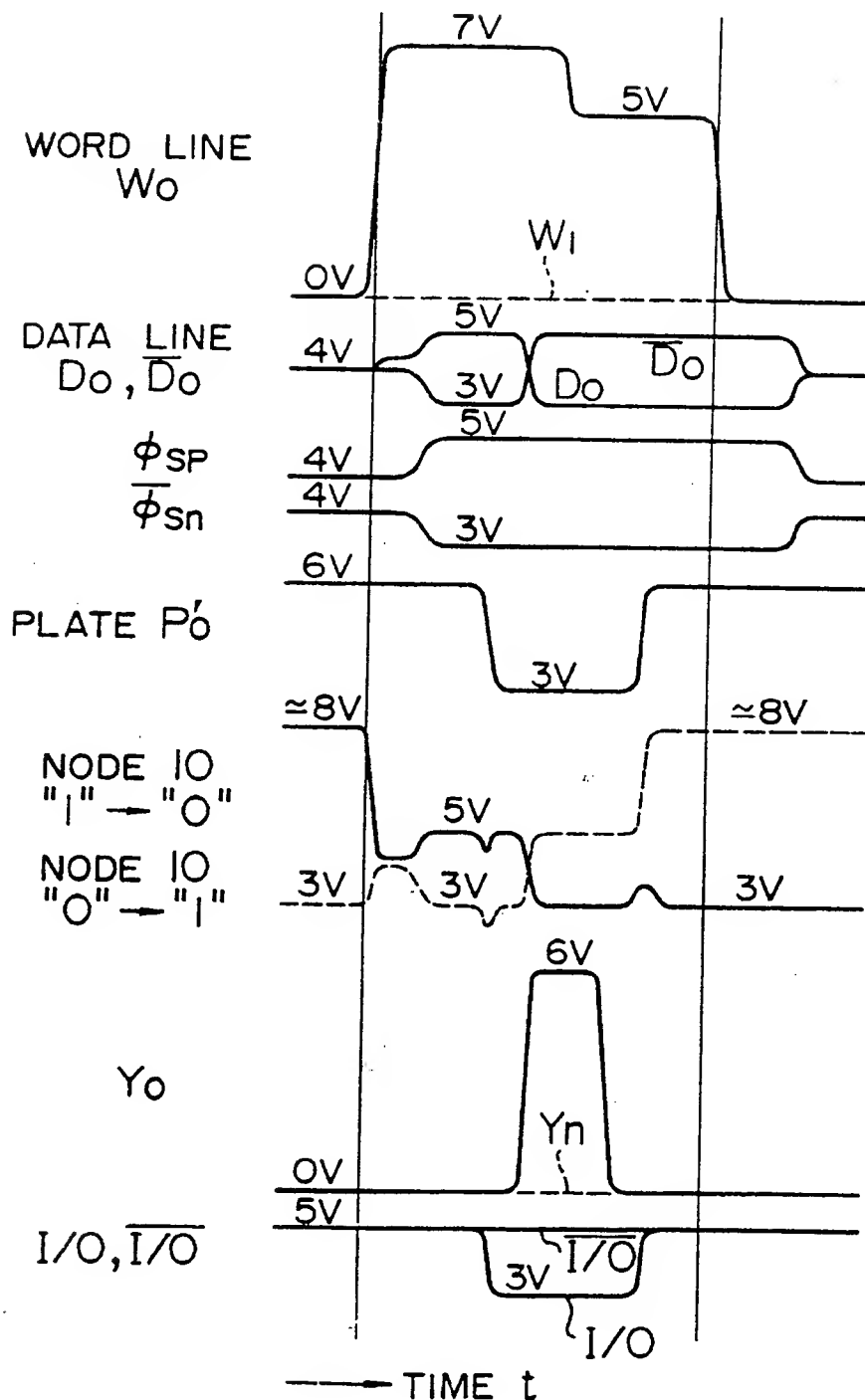


FIG. 41A

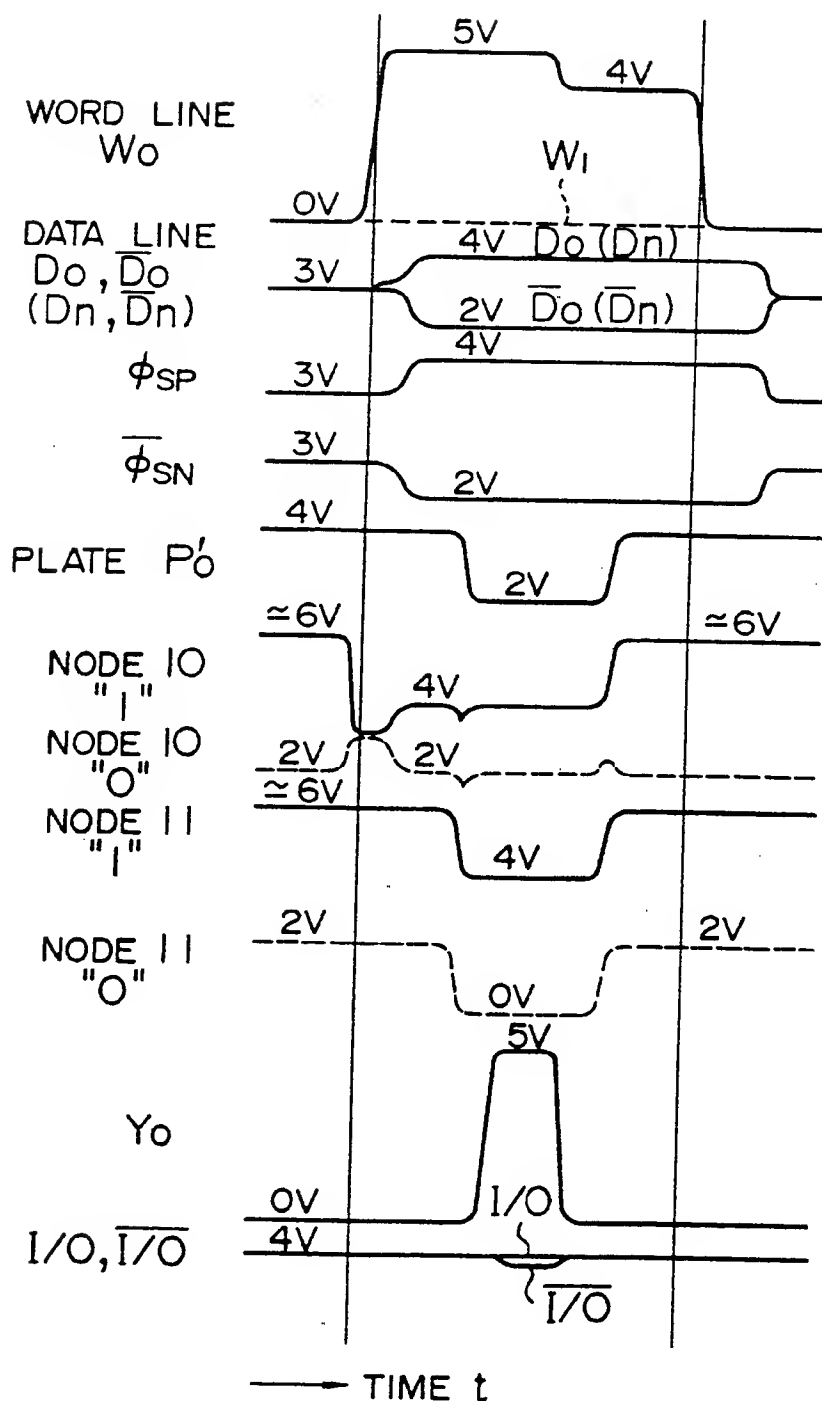


FIG. 4IB

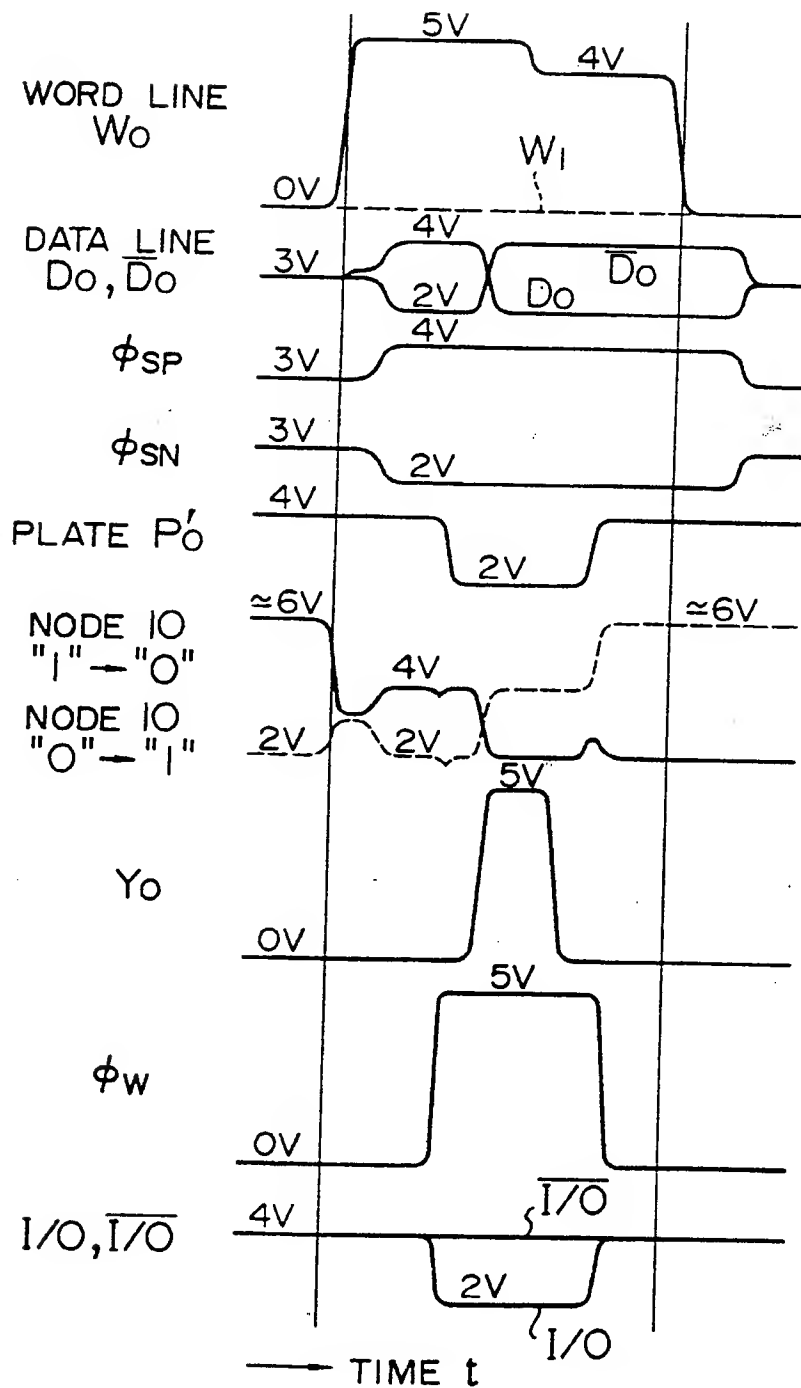


FIG. 42

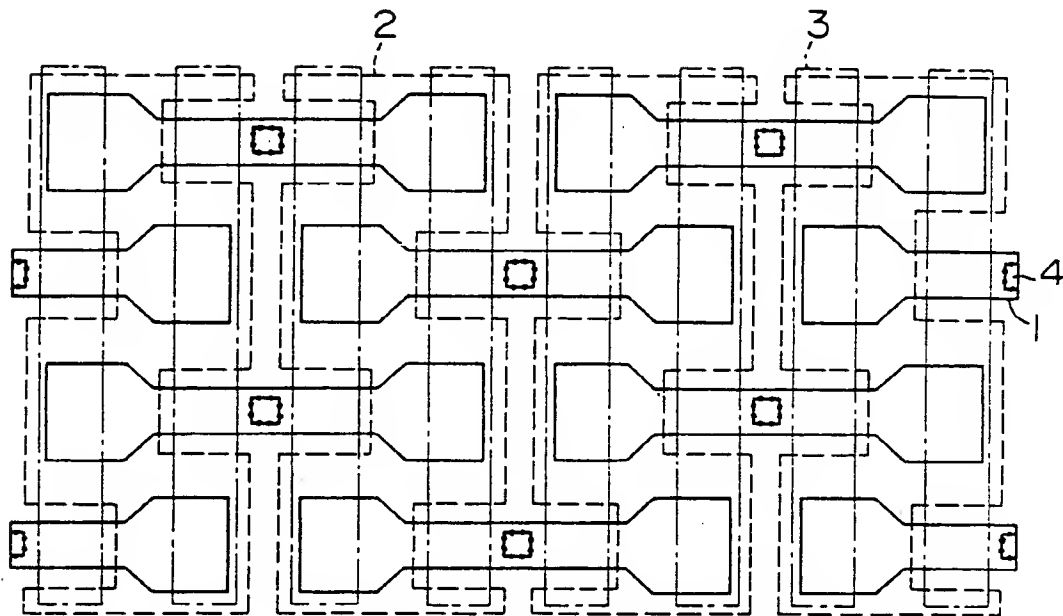


FIG. 43

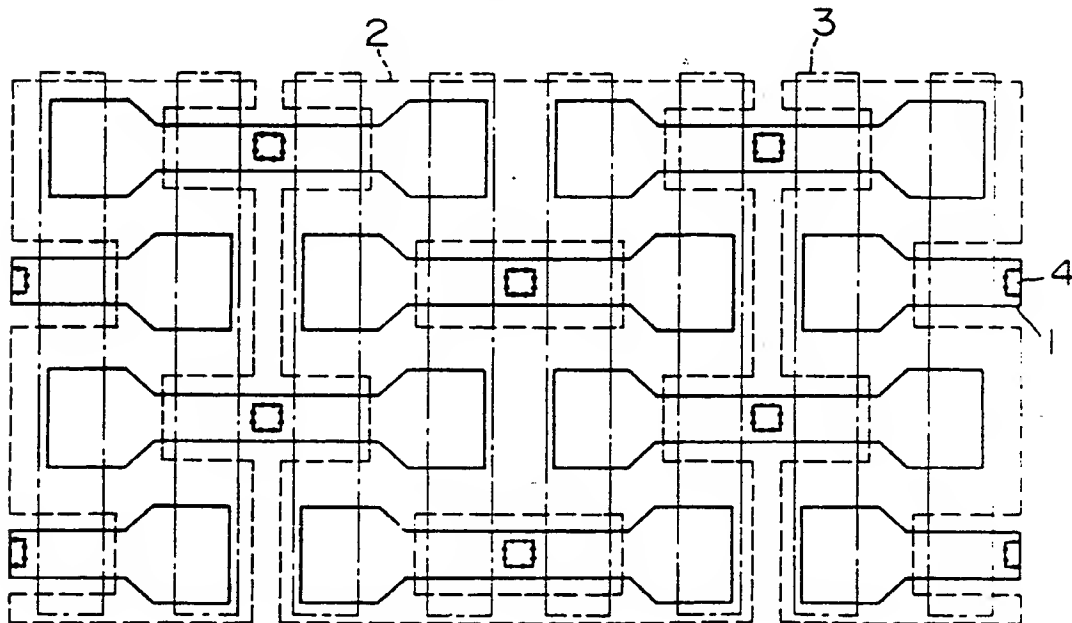


FIG. 42

FIG. 44A

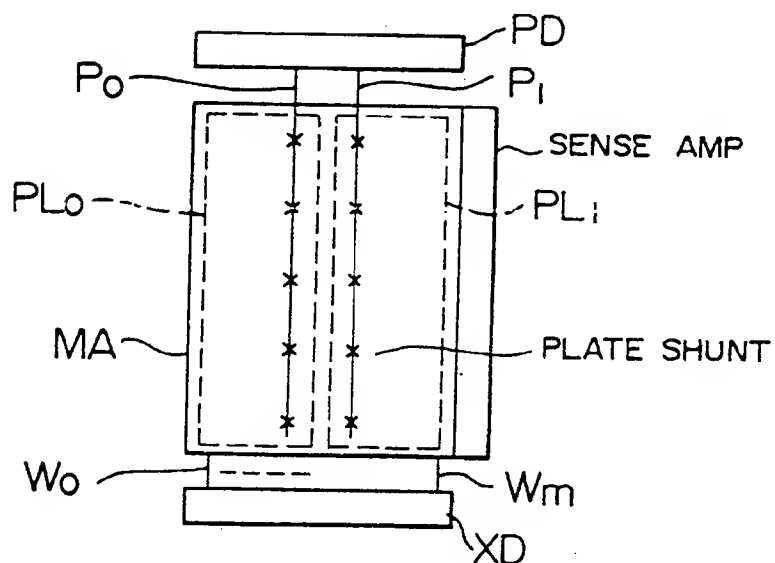


FIG. 44B

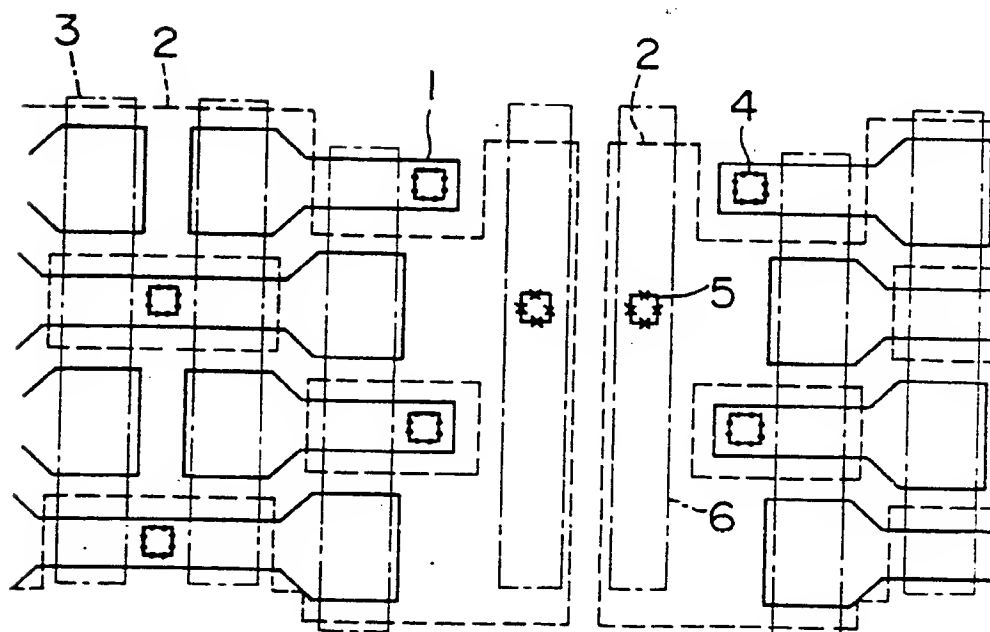


FIG. 45A

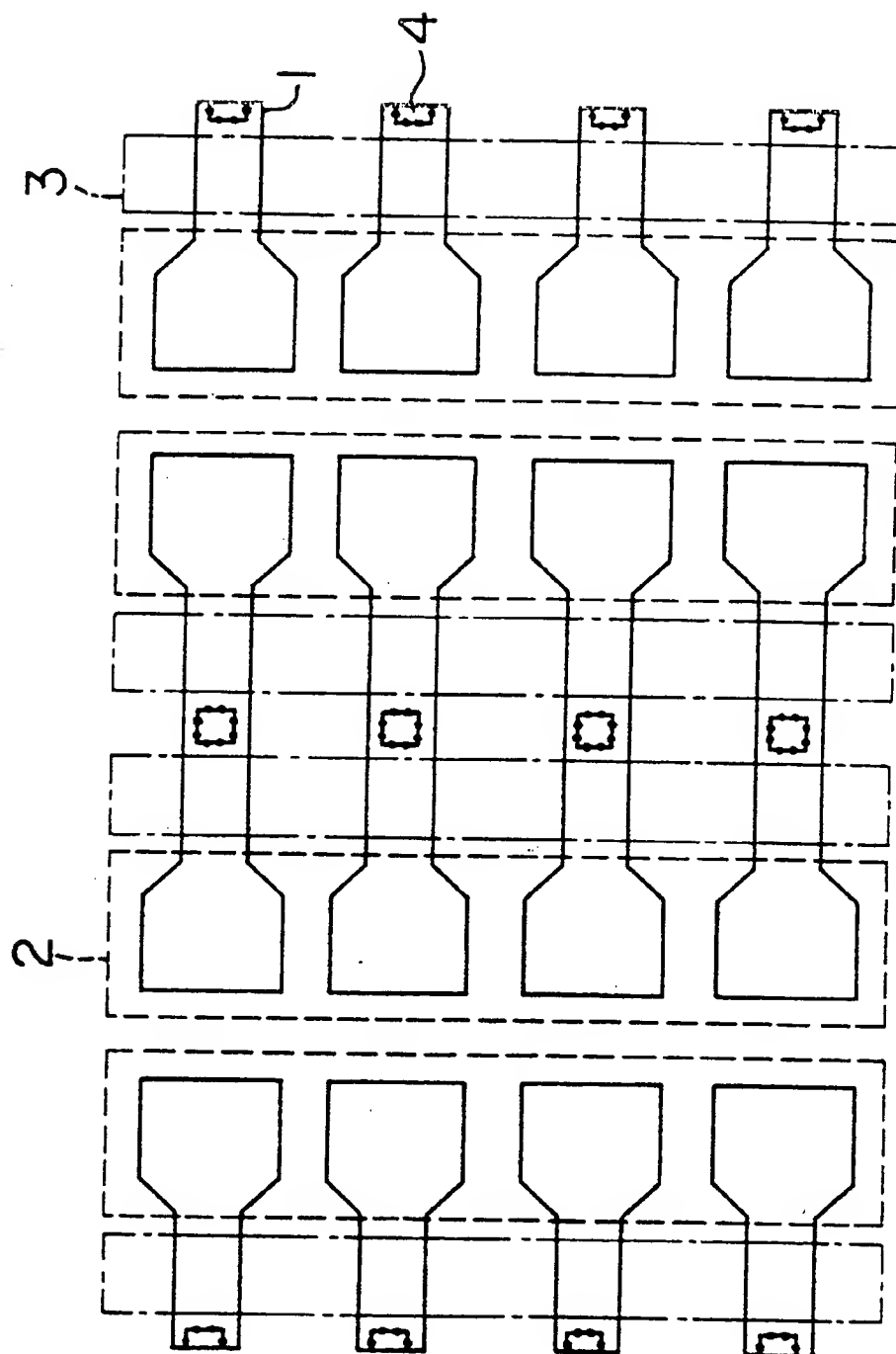


FIG. 45A

FIG. 45B

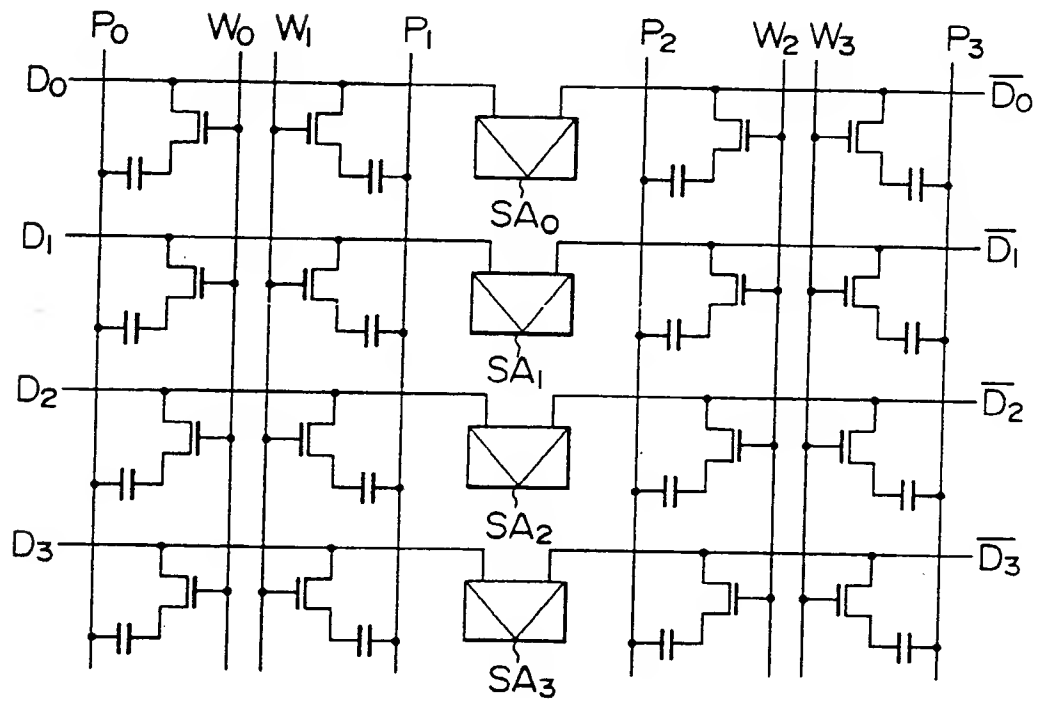
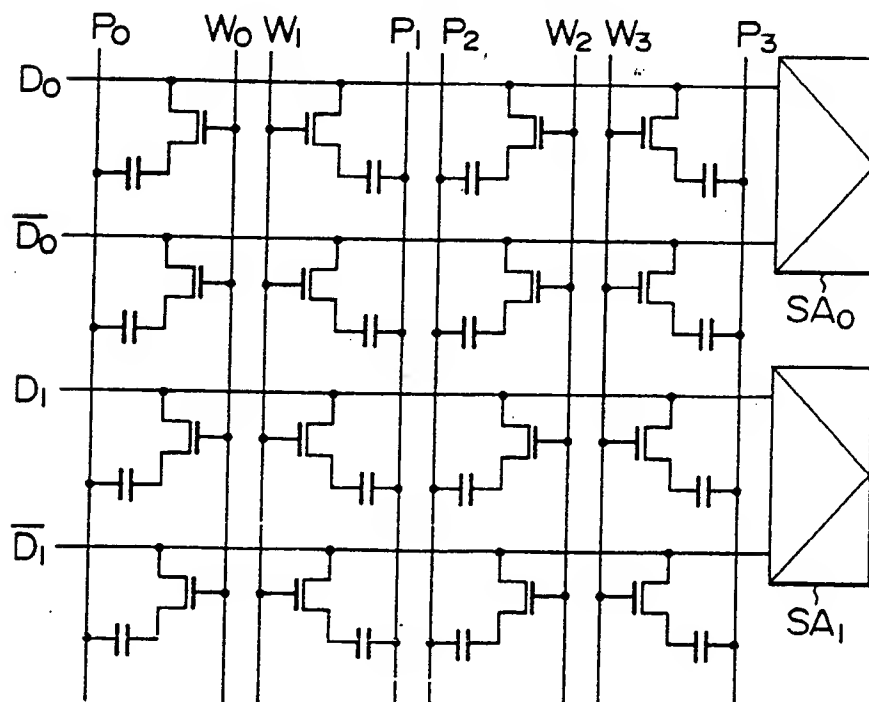


FIG. 45C



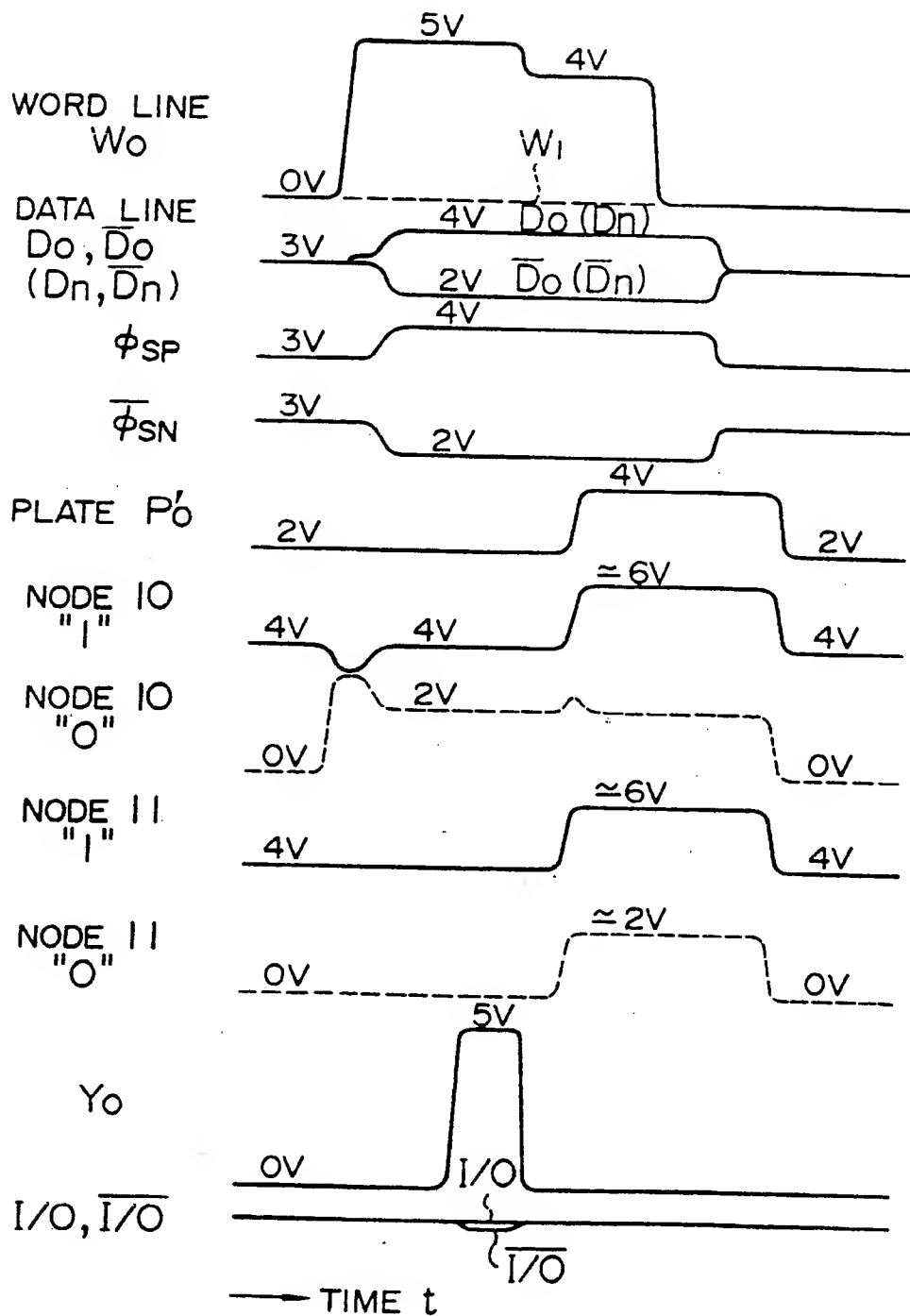
[illegible]



FIG. 47

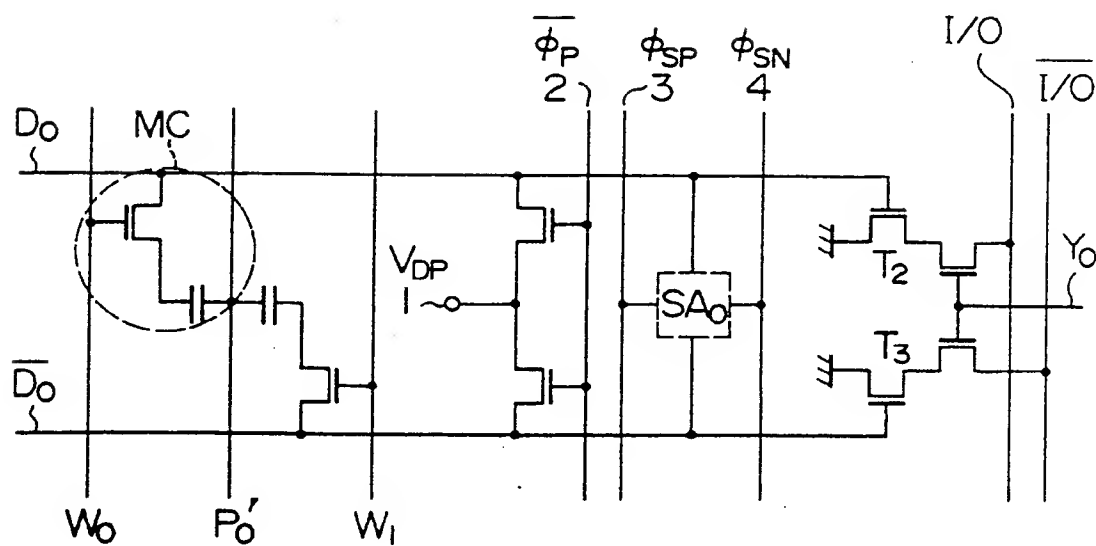


FIG. 48

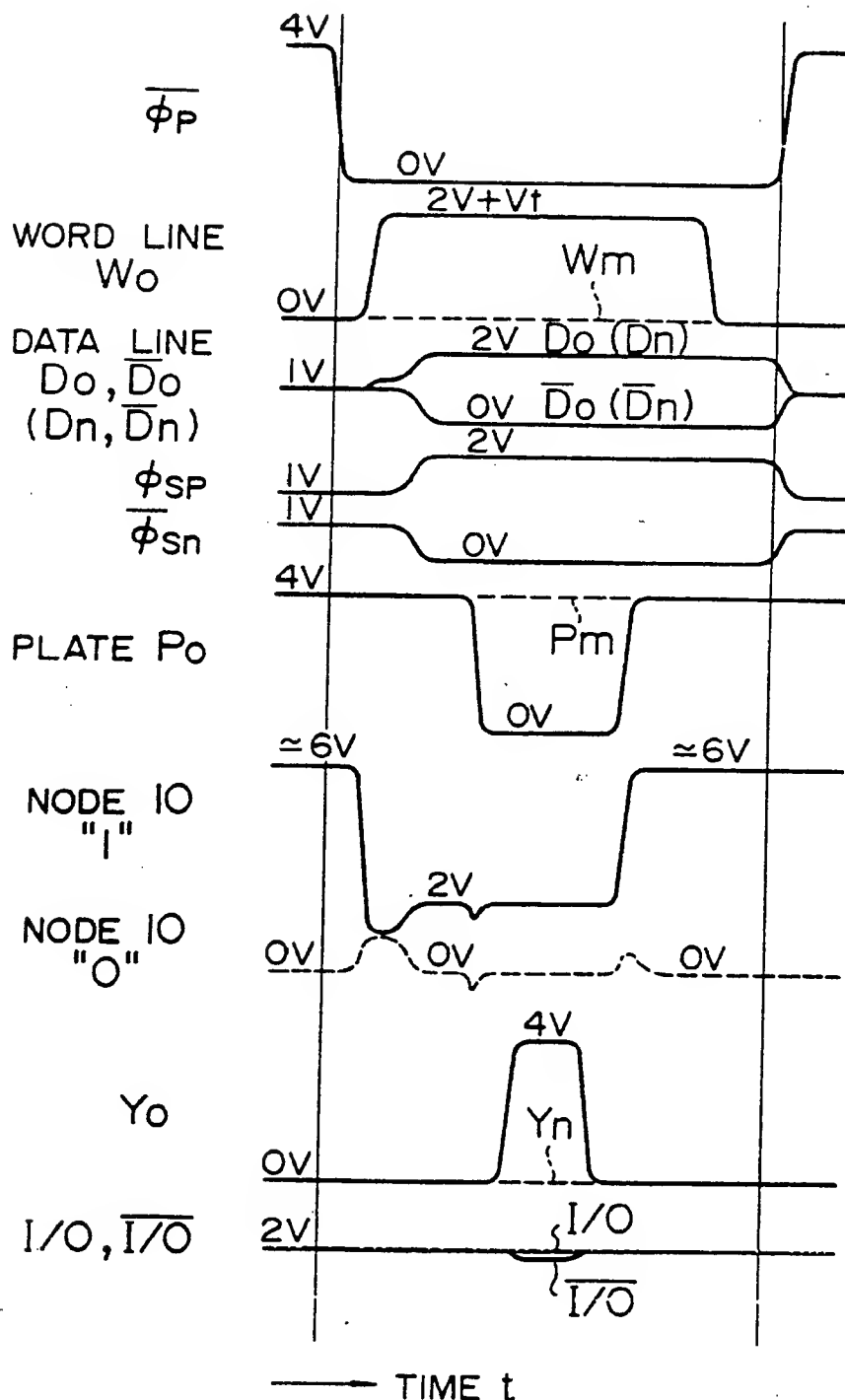


FIG. 49A

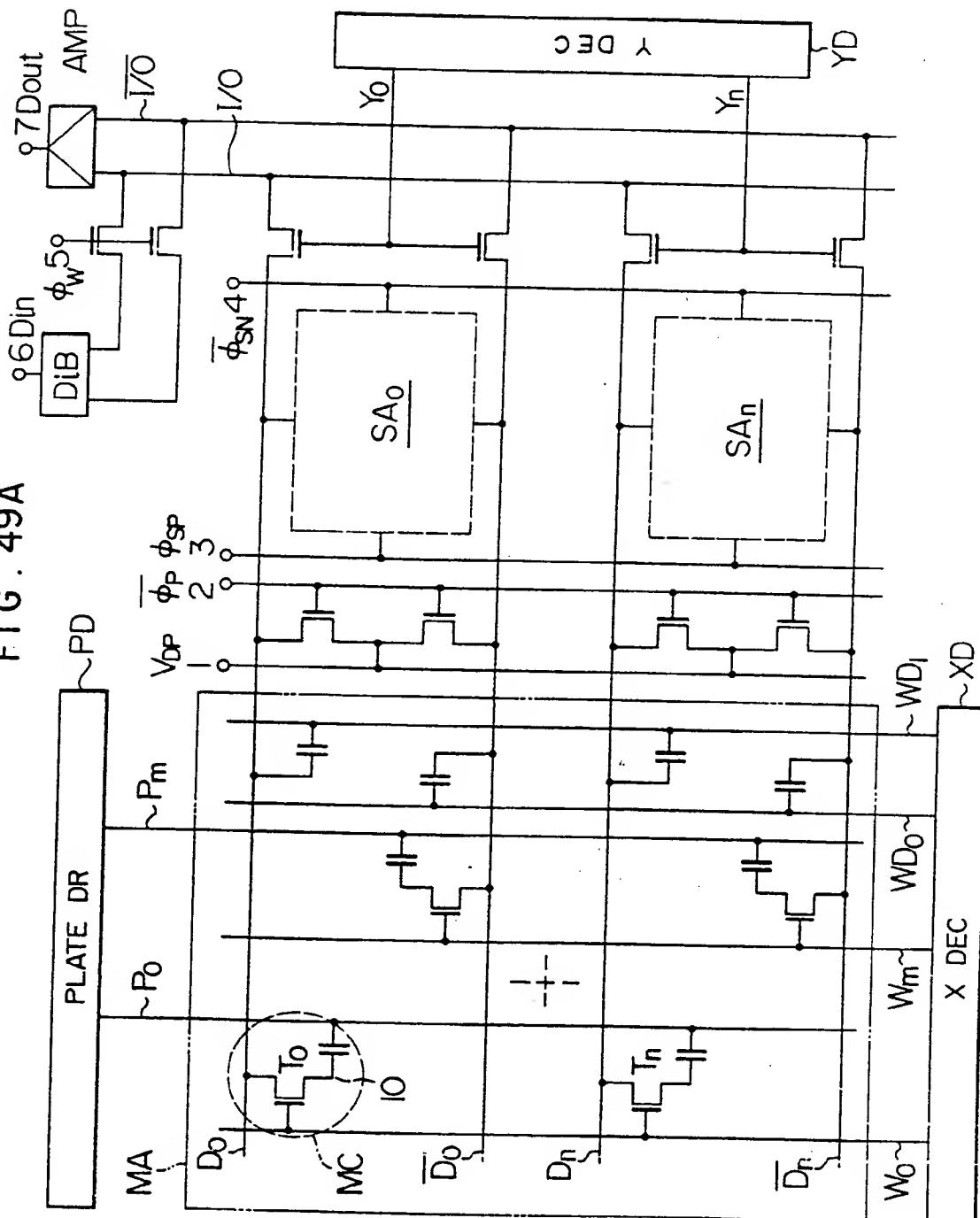


FIG. 49B

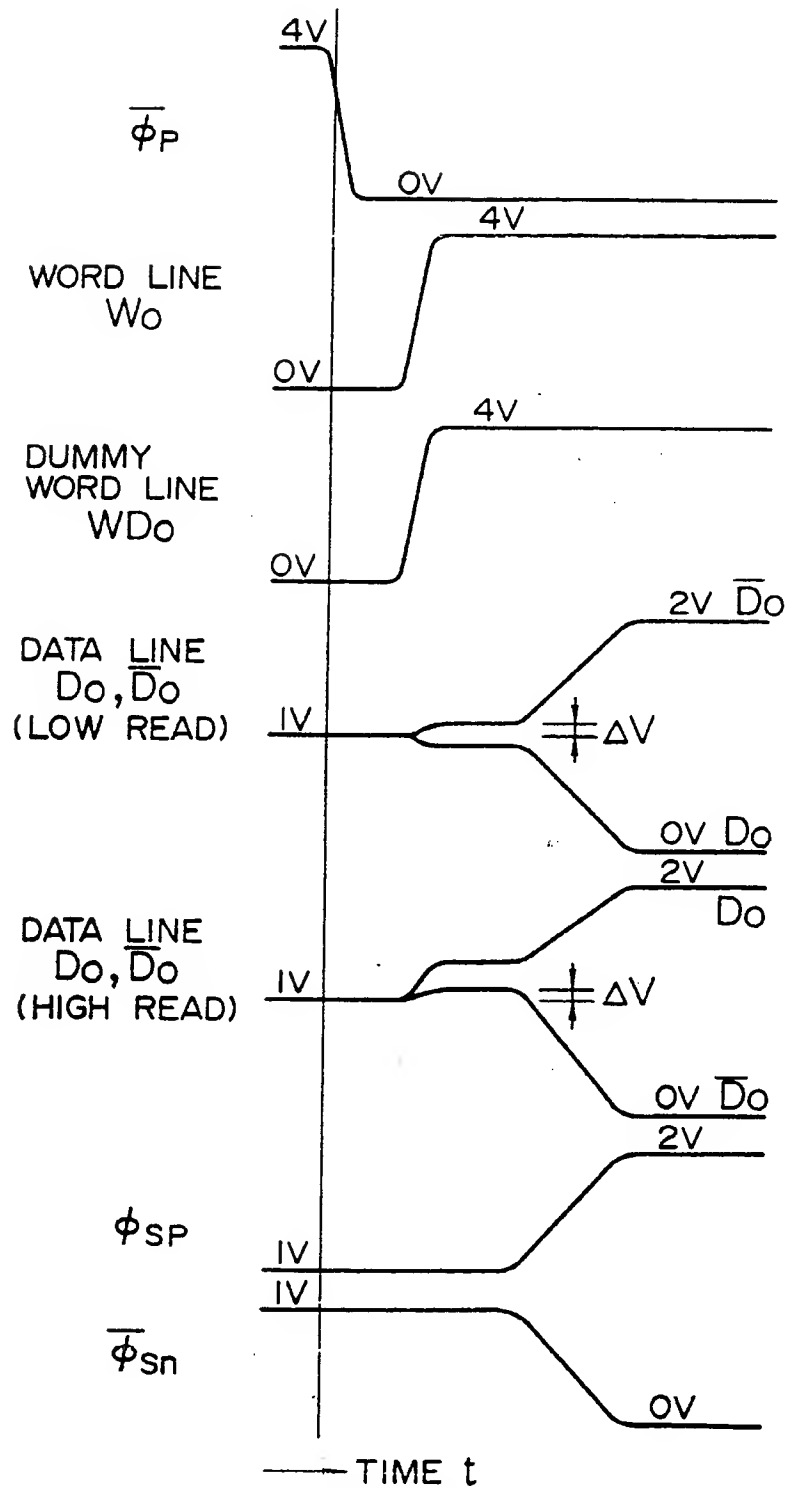


FIG. 49B

FIG. 50A

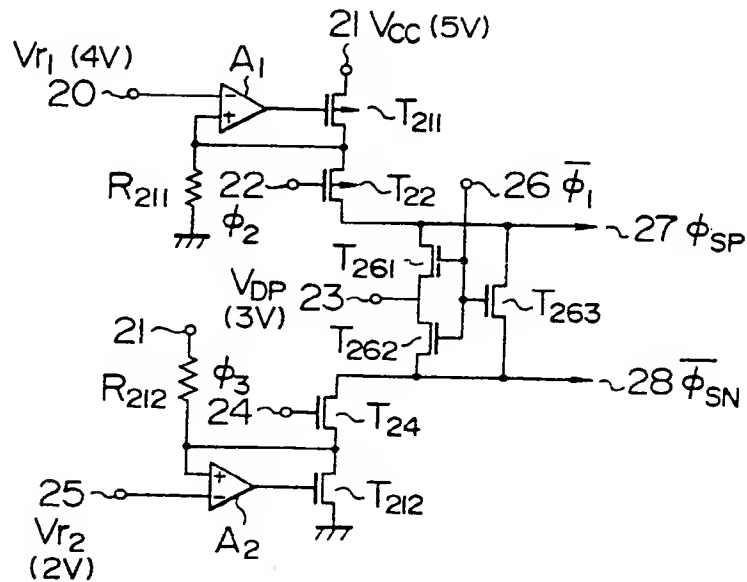


FIG. 50B

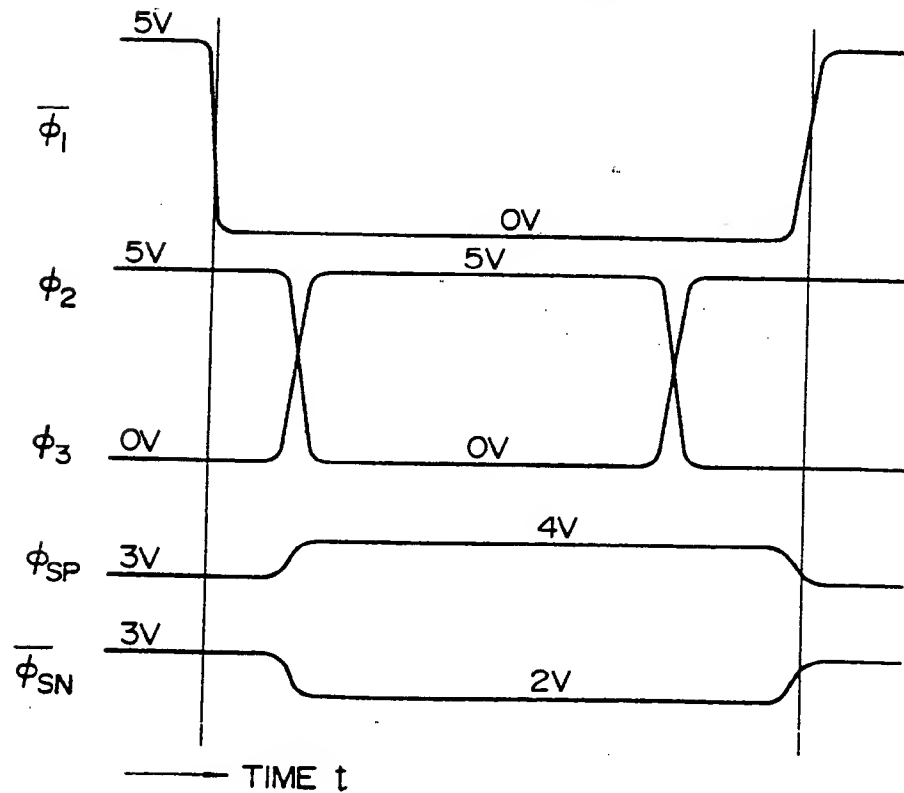


FIG. 5IA

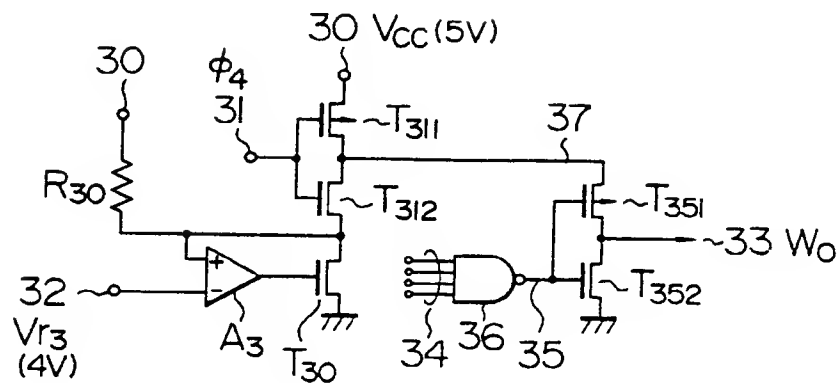


FIG. 5IB

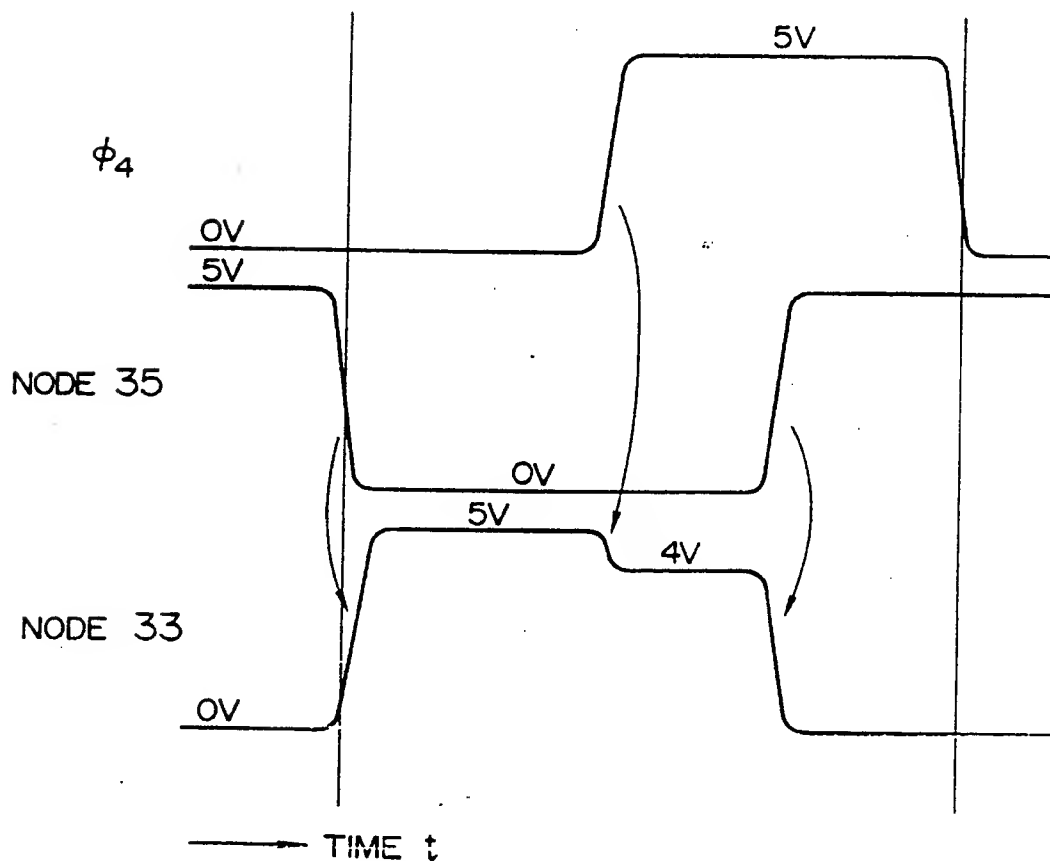


FIG. 52A

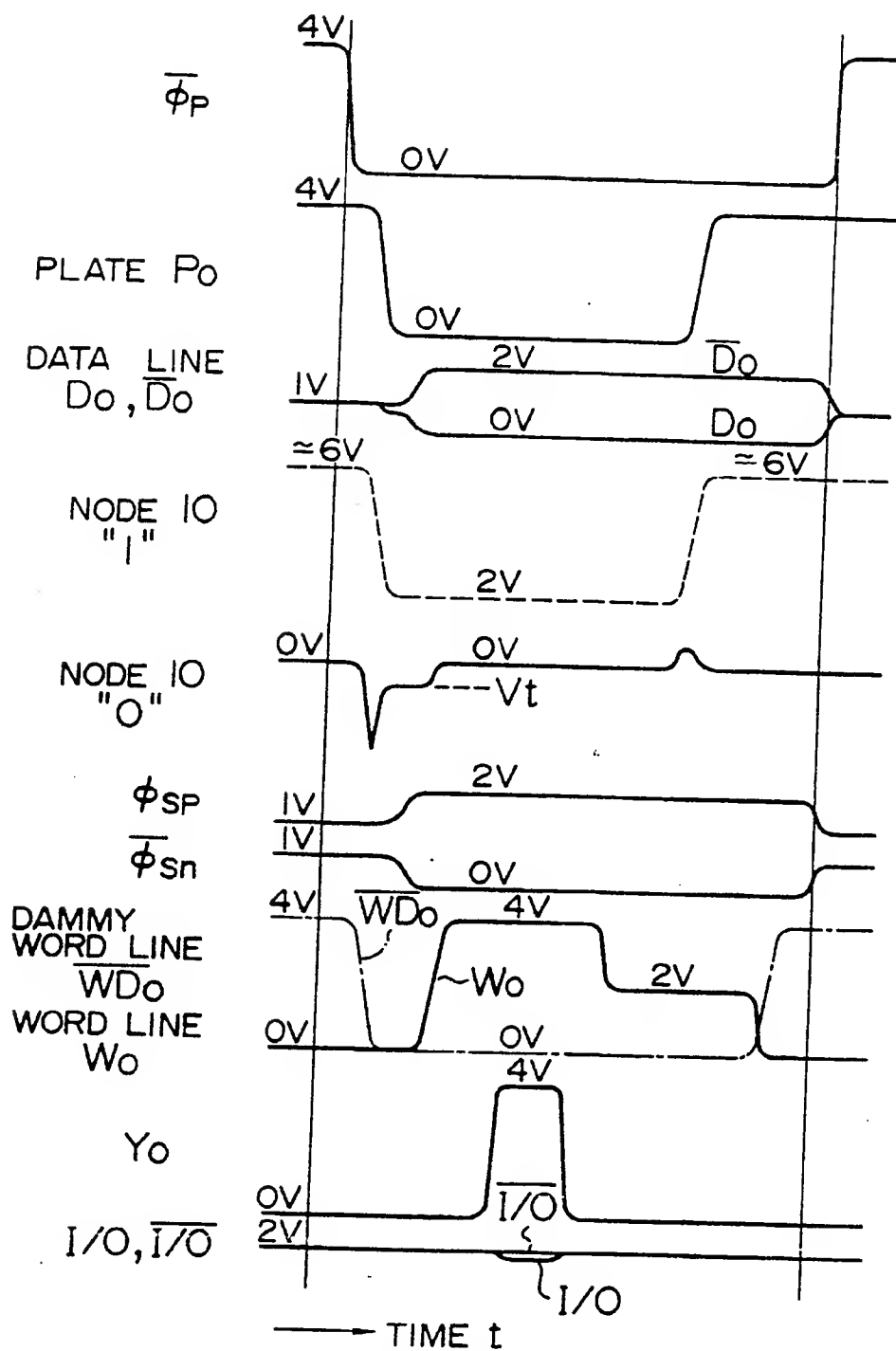


FIG. 52B

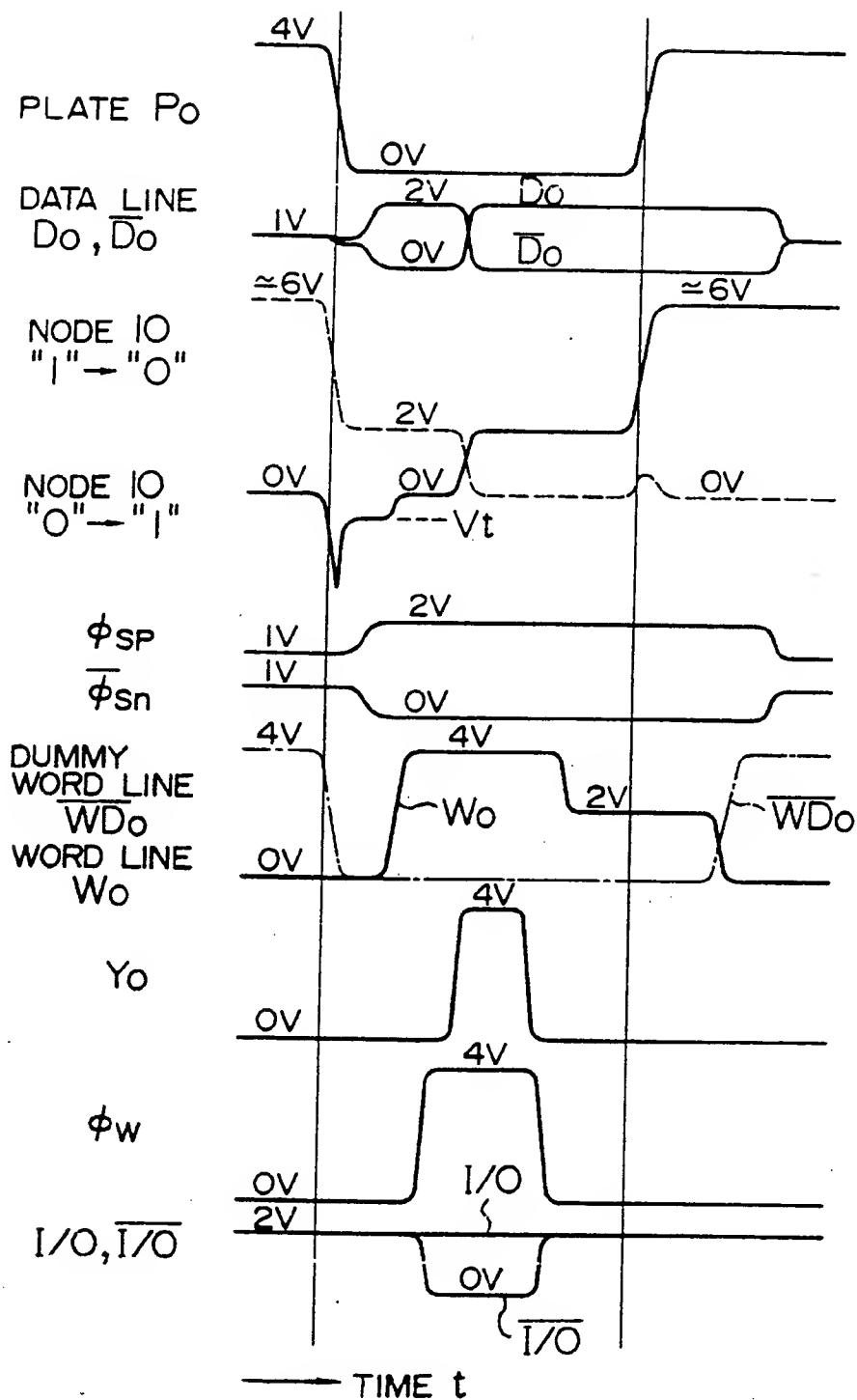




FIG. 53A

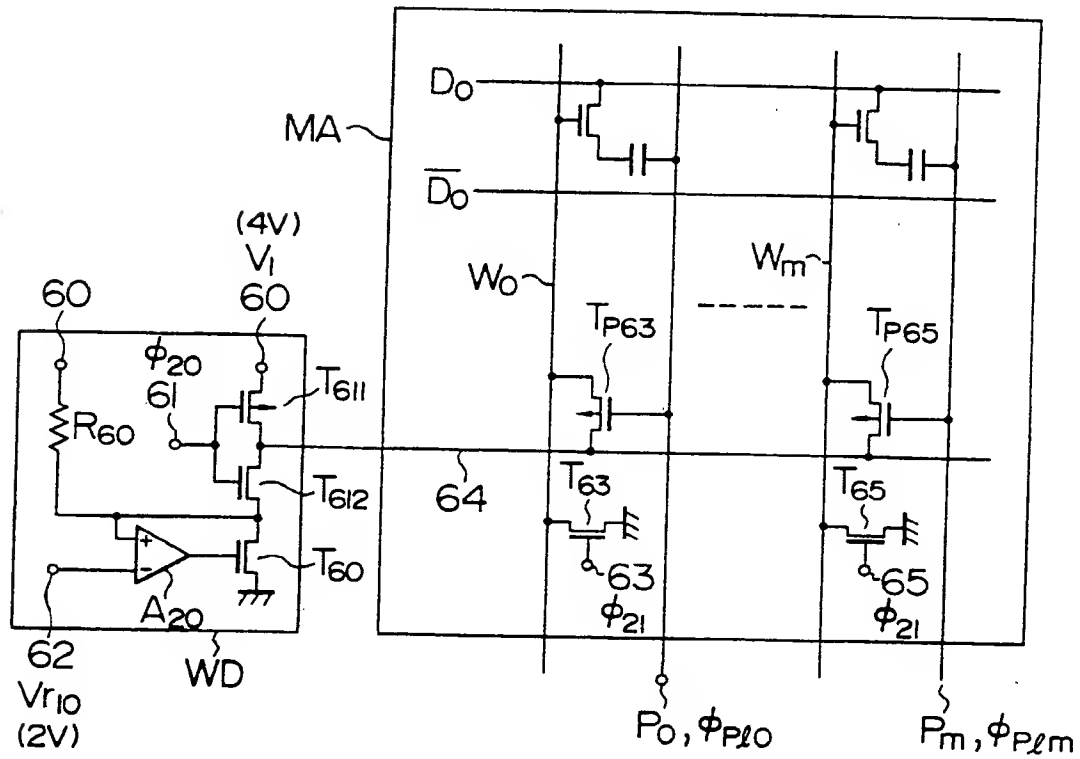
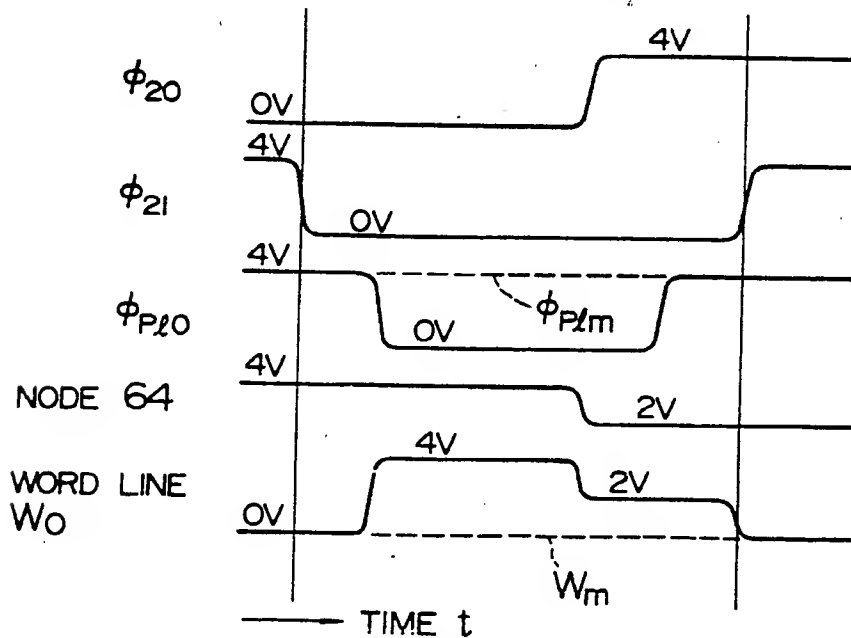


FIG. 53B



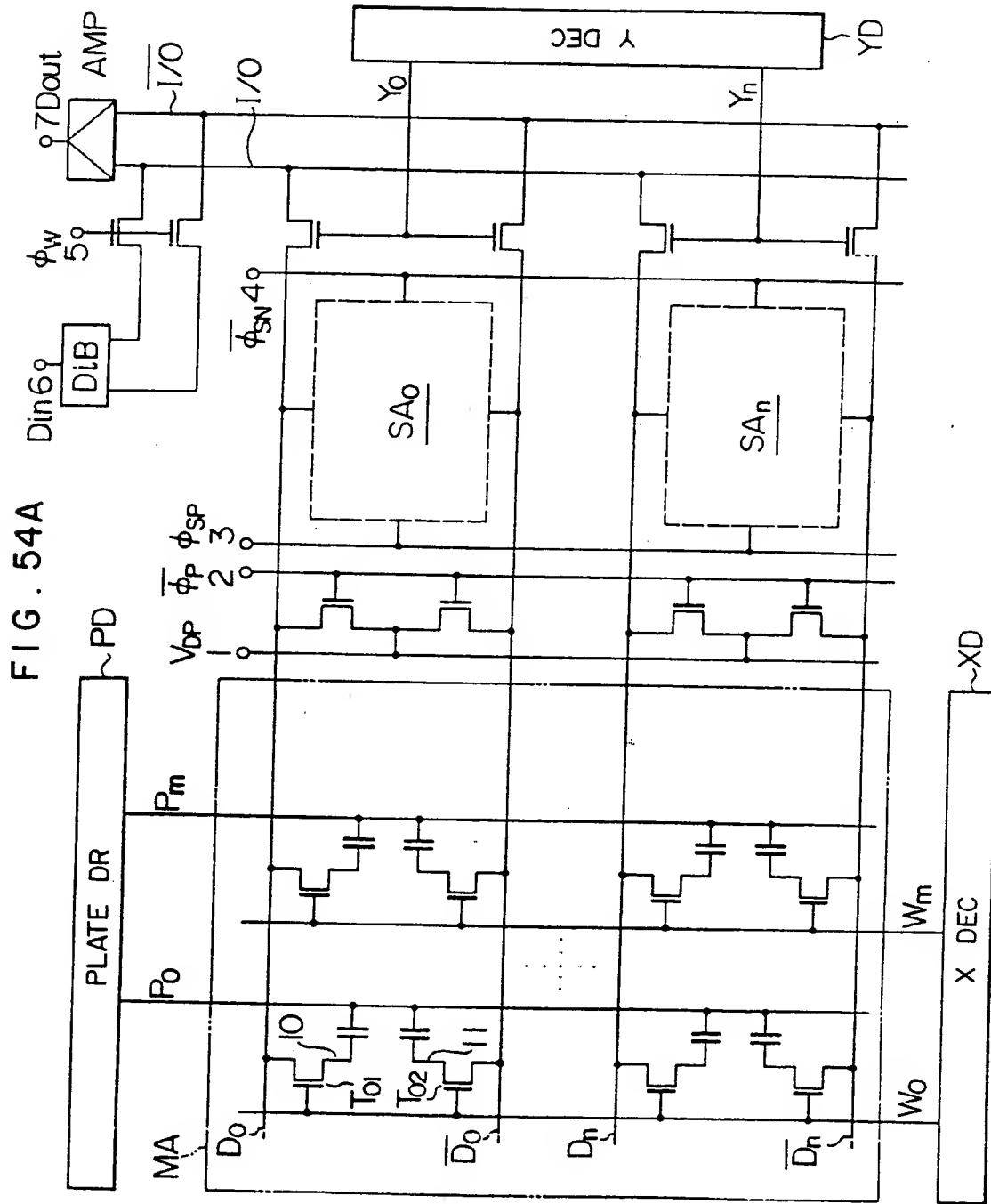


FIG. 54B

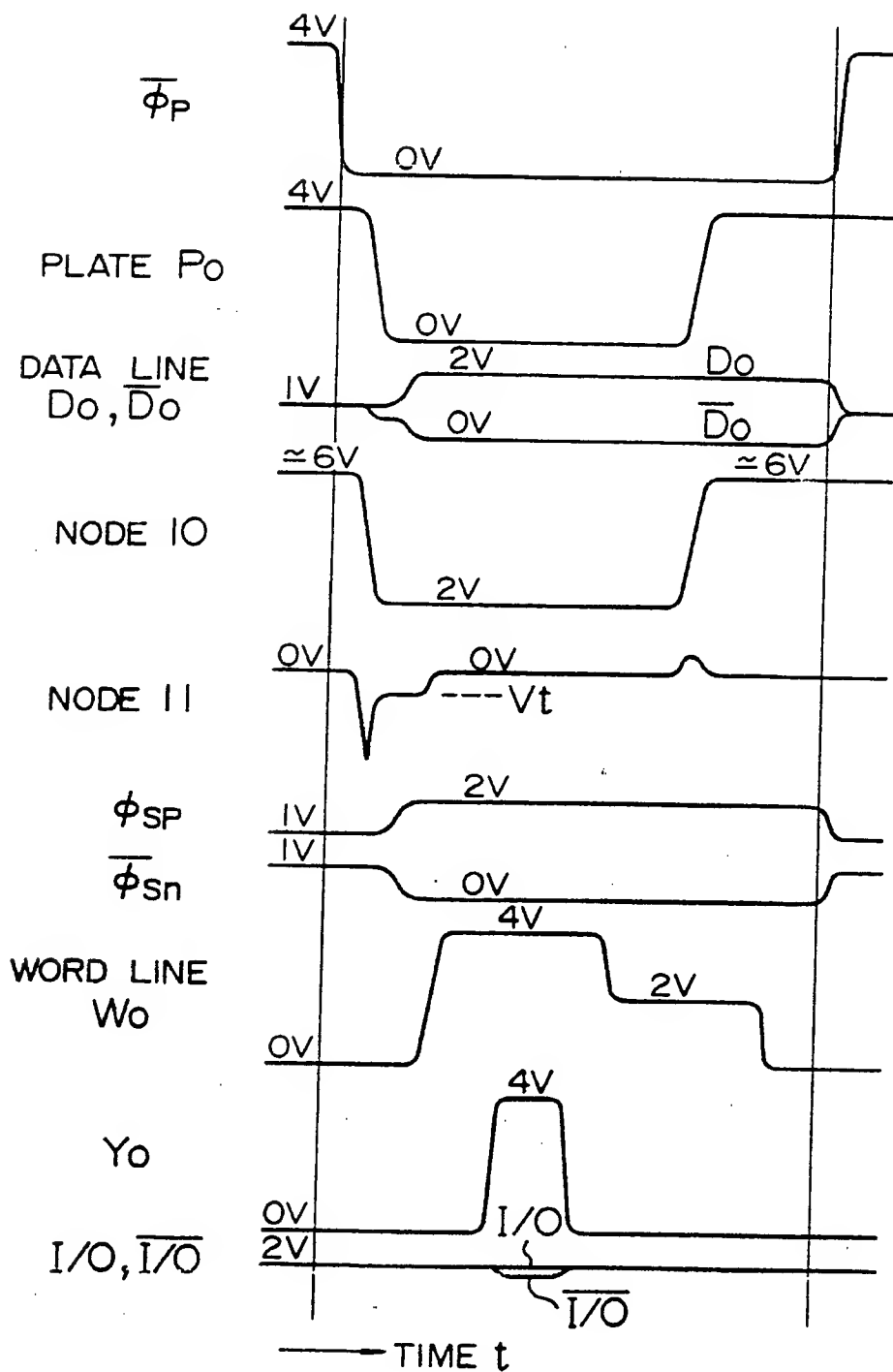


FIG. 54B

FIG. 54C

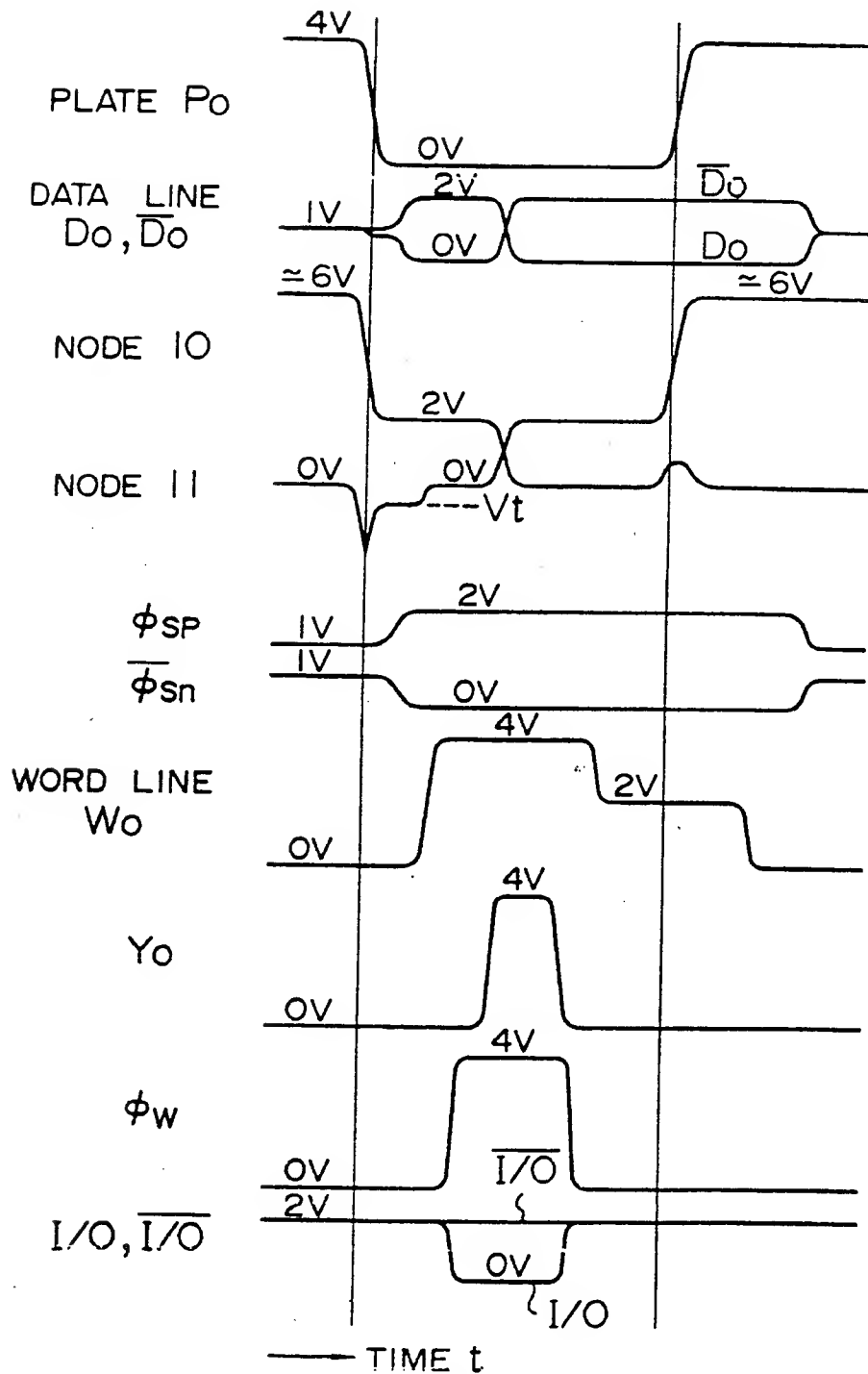


FIG. 54C

FIG. 55A

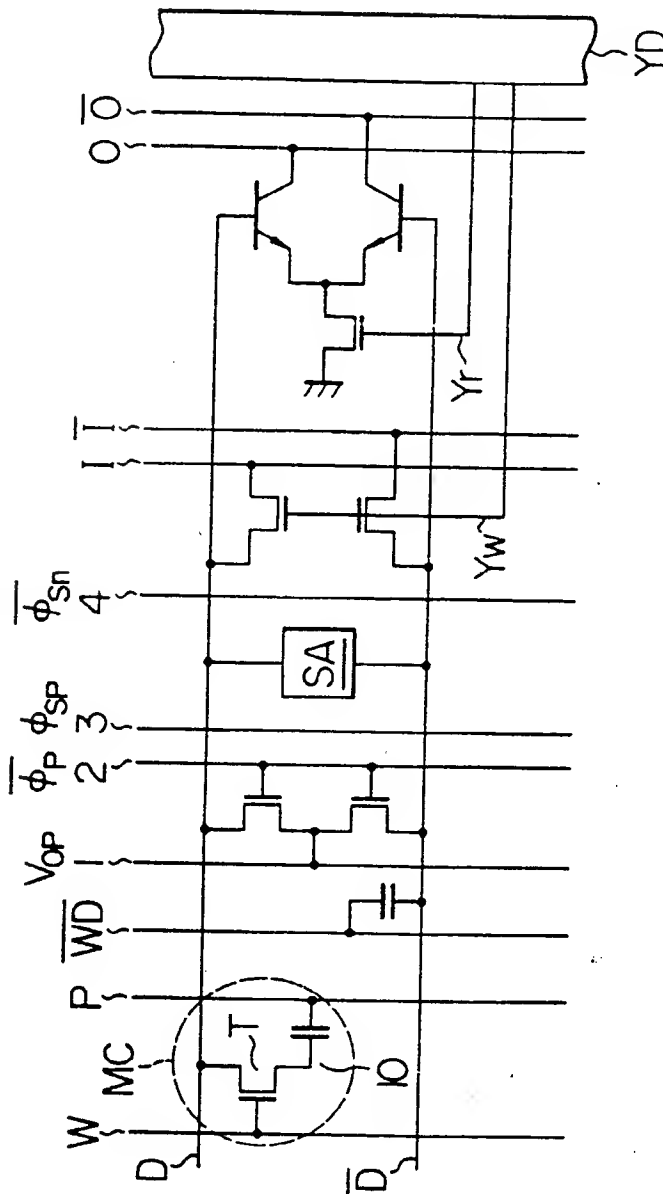


FIG. 59

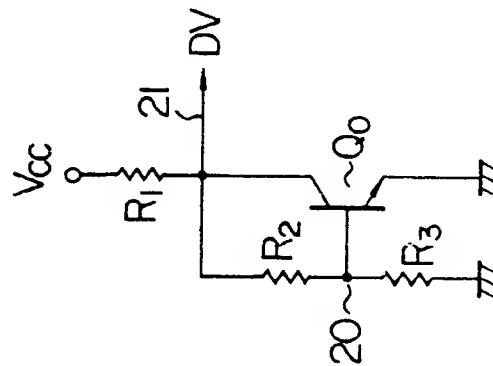


FIG. 55B

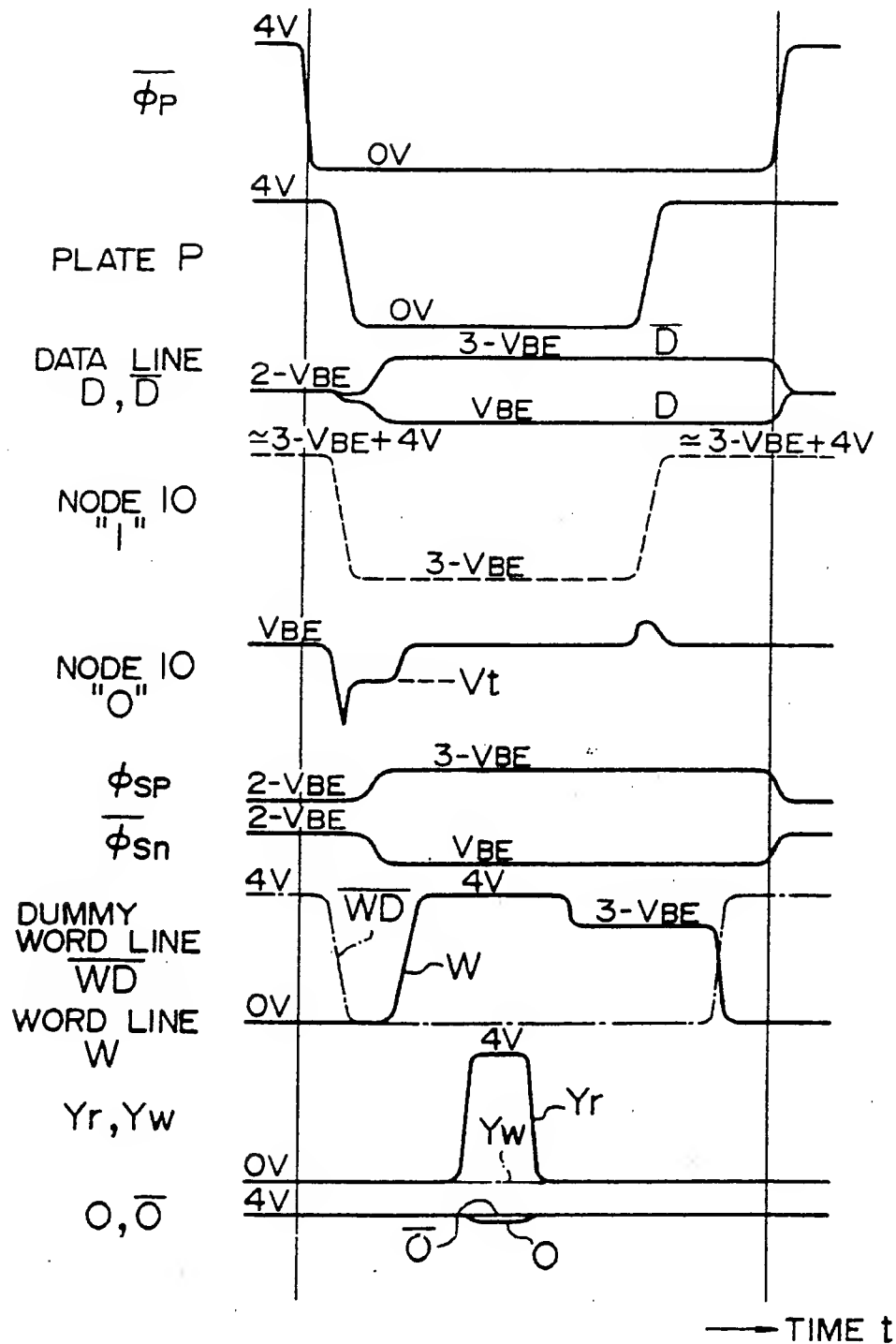


FIG. 55C

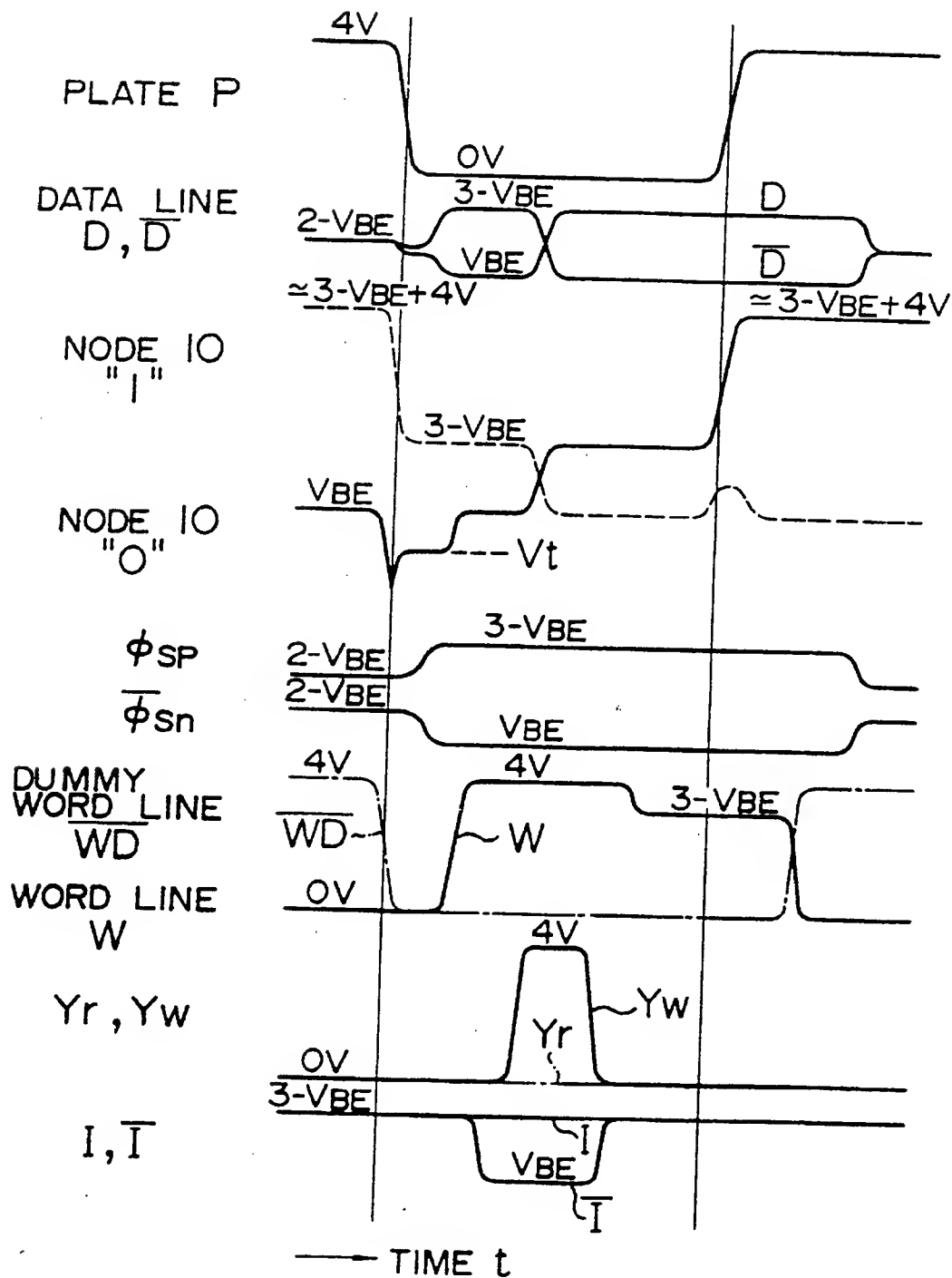


FIG. 56

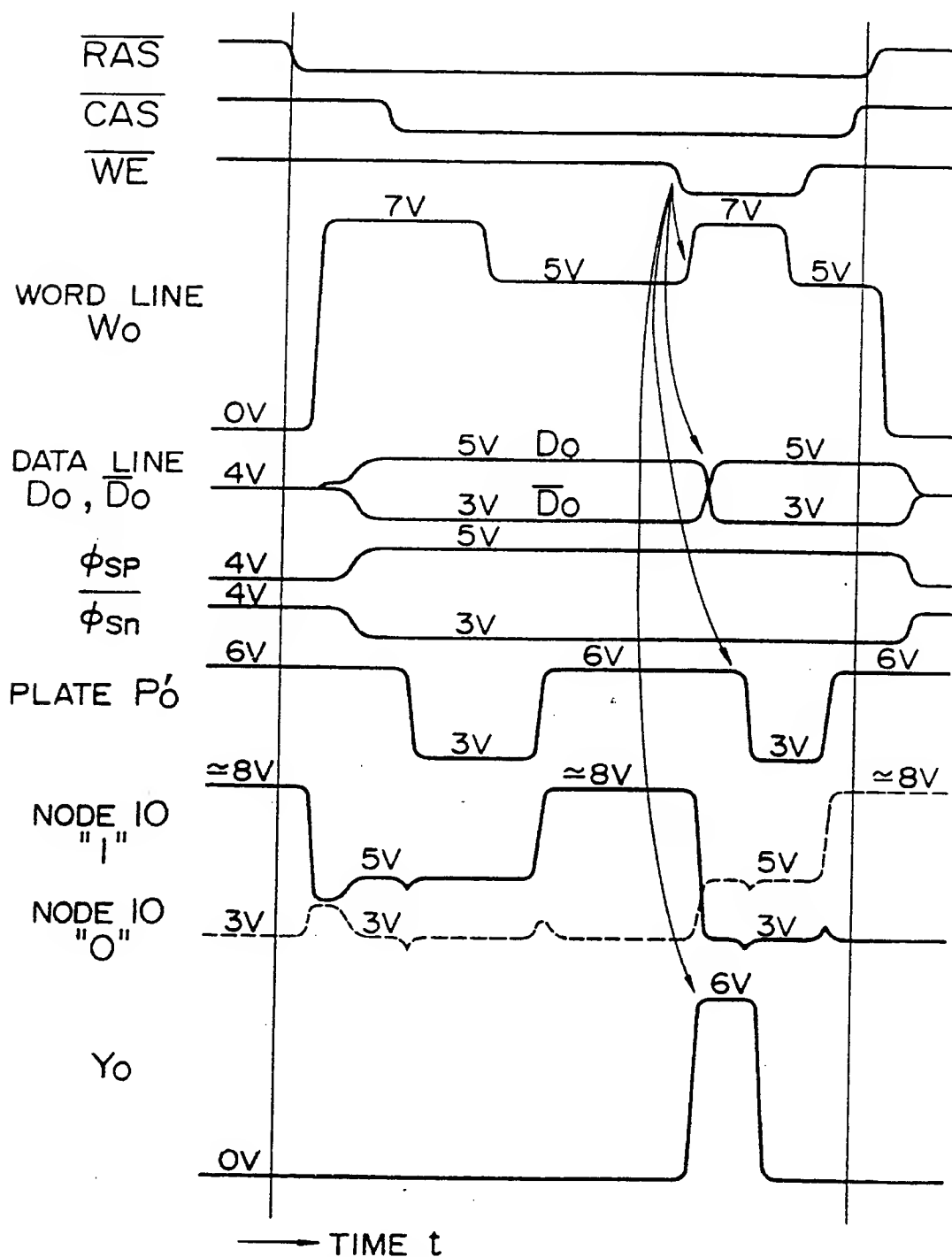




FIG. 57

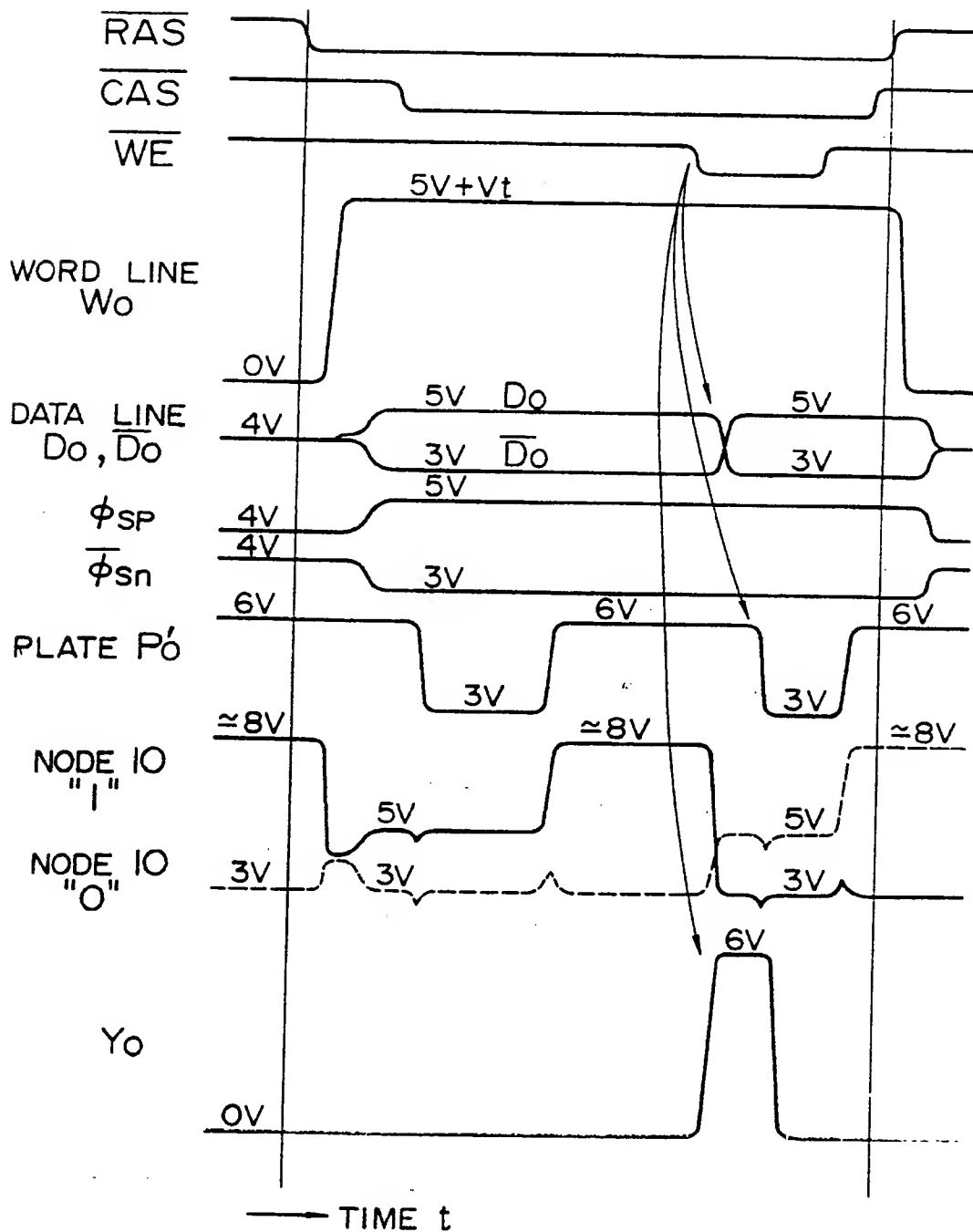


FIG. 58A

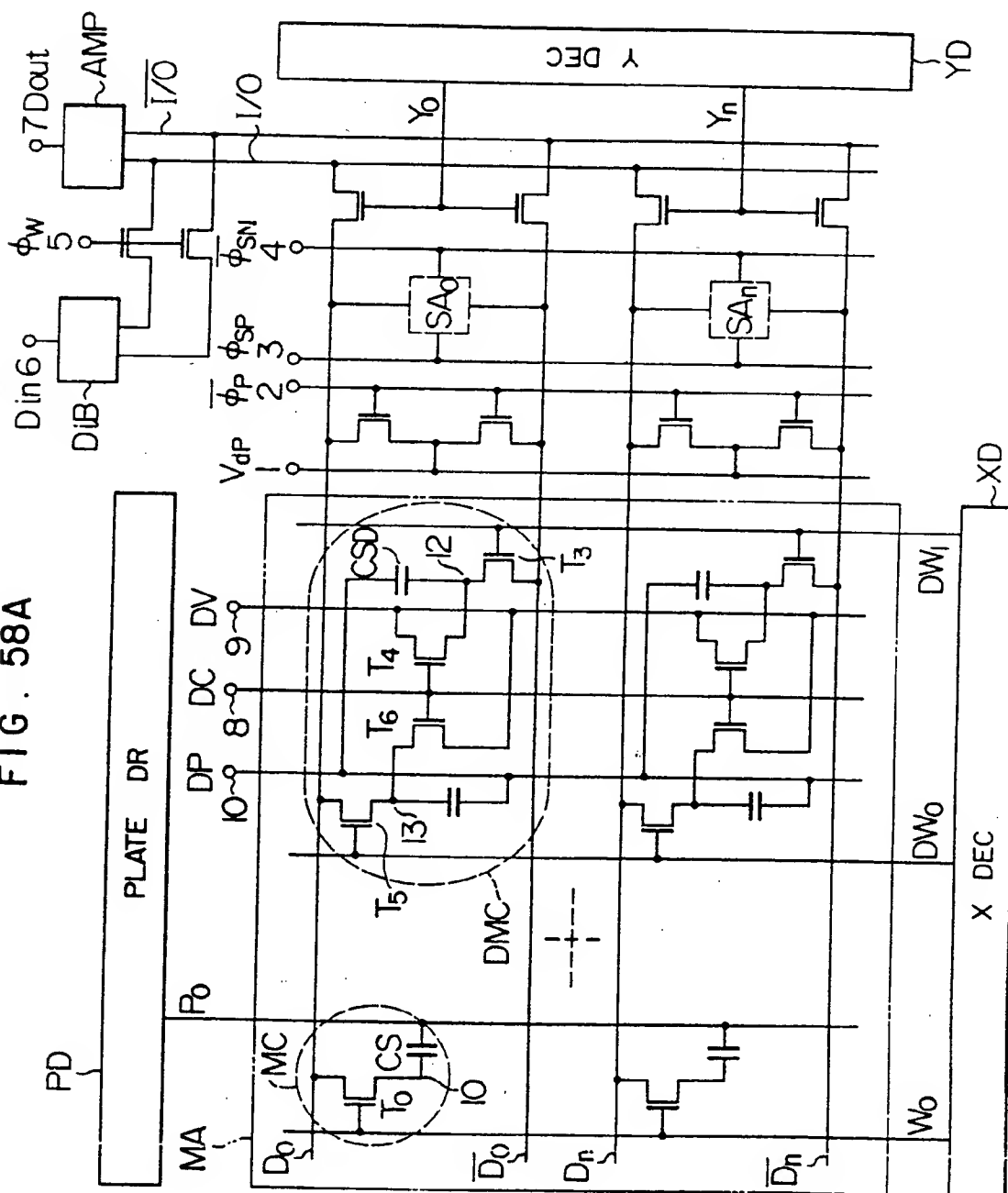


FIG. 58B

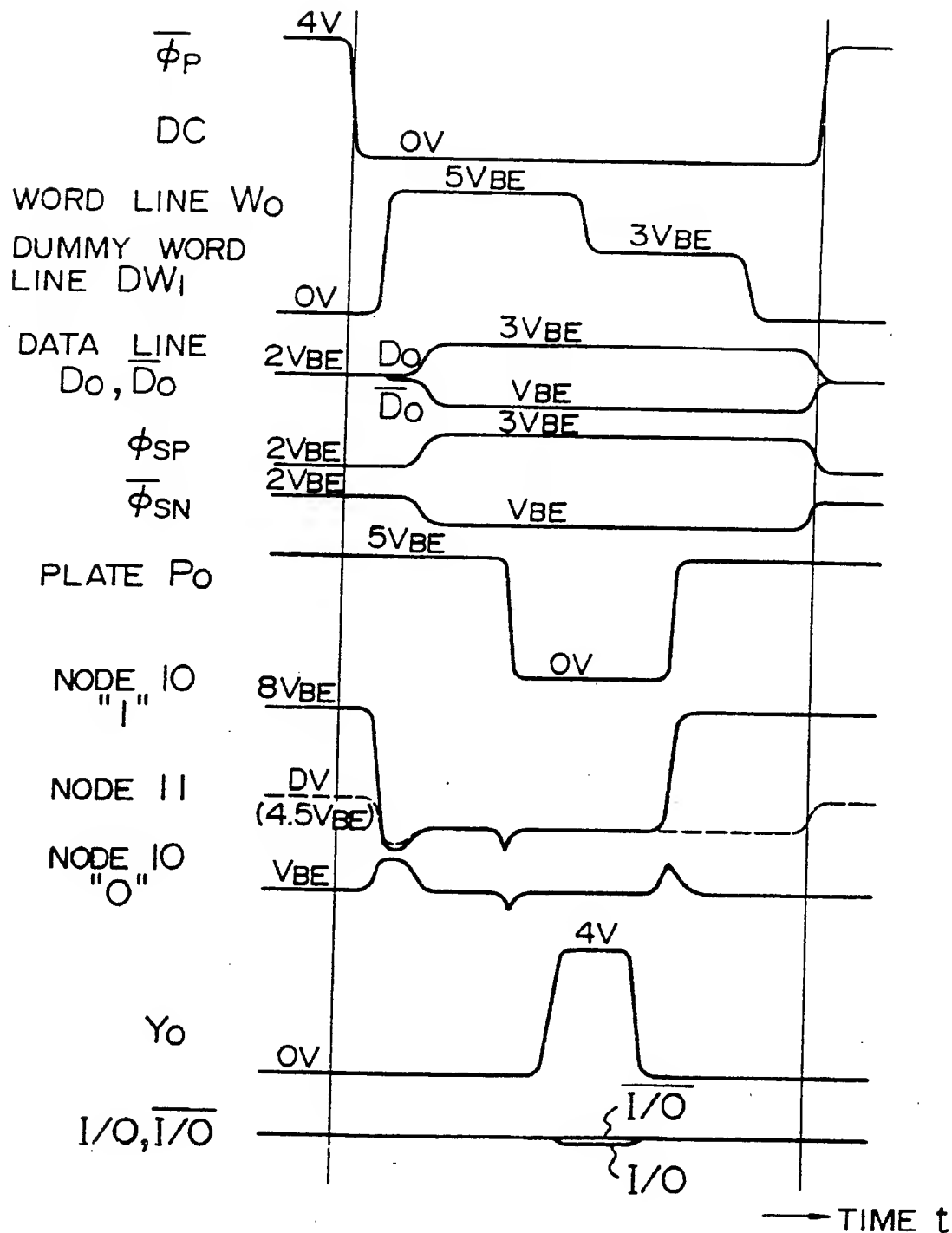
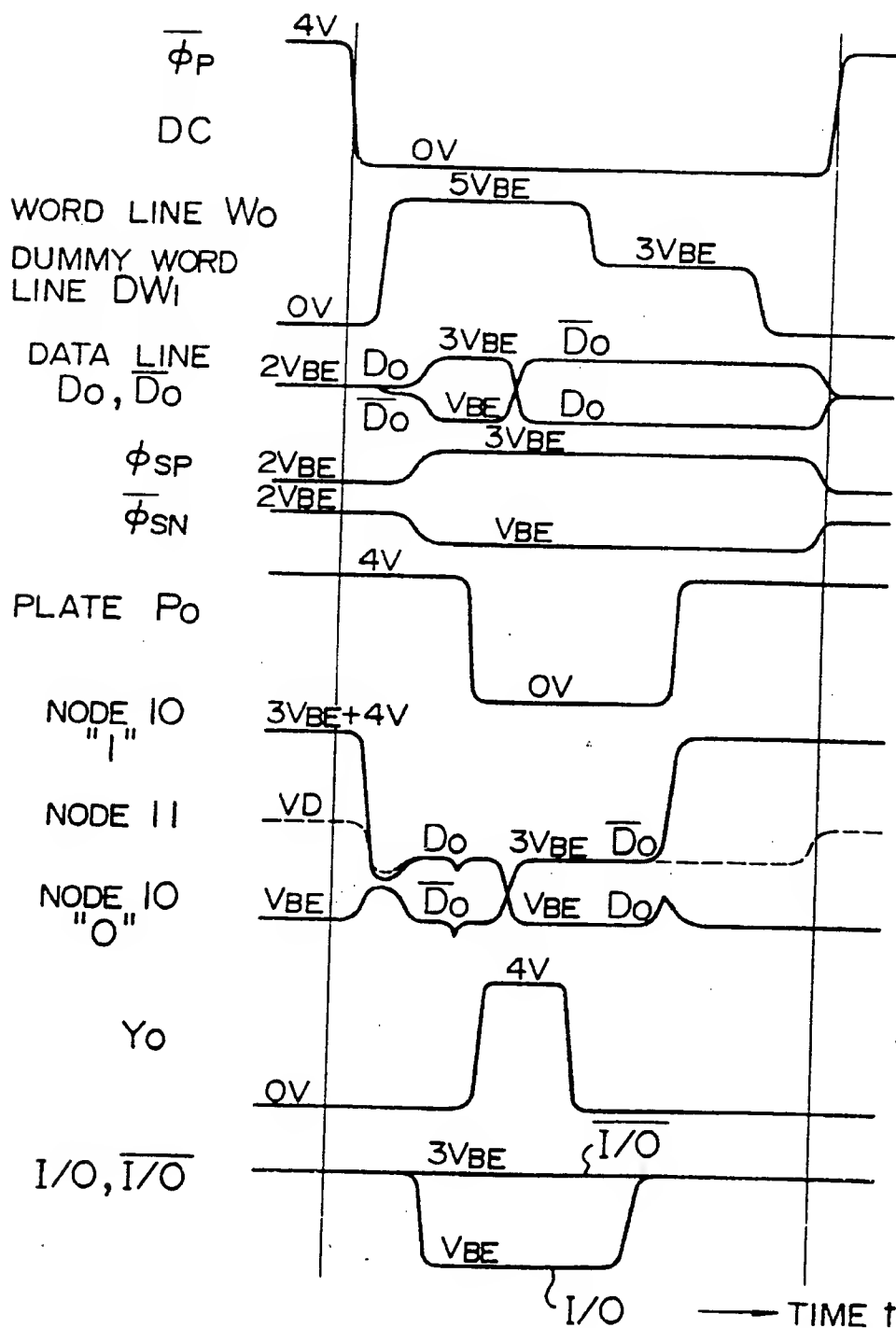


FIG. 58B

FIG. 58C



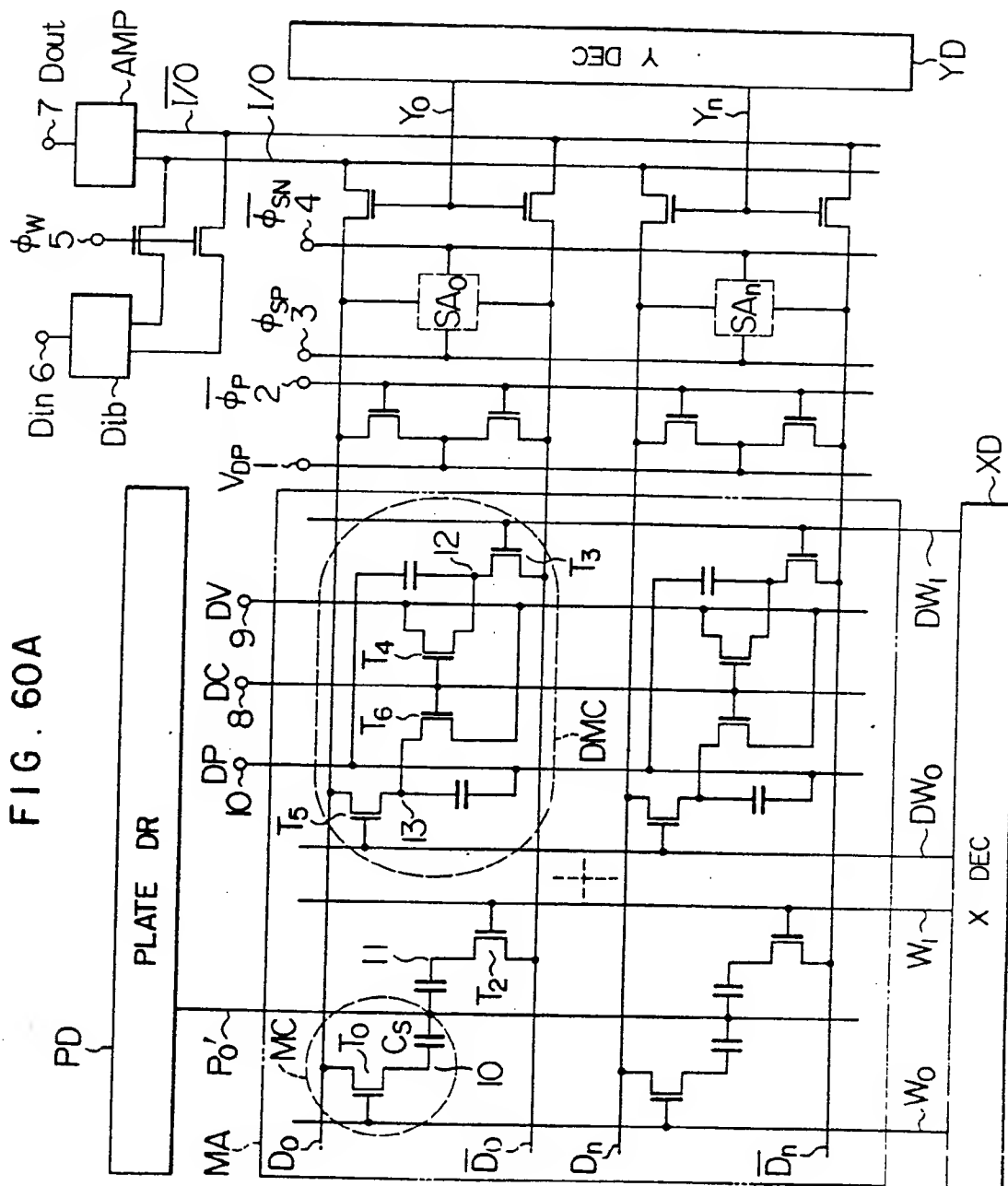


FIG. 60B

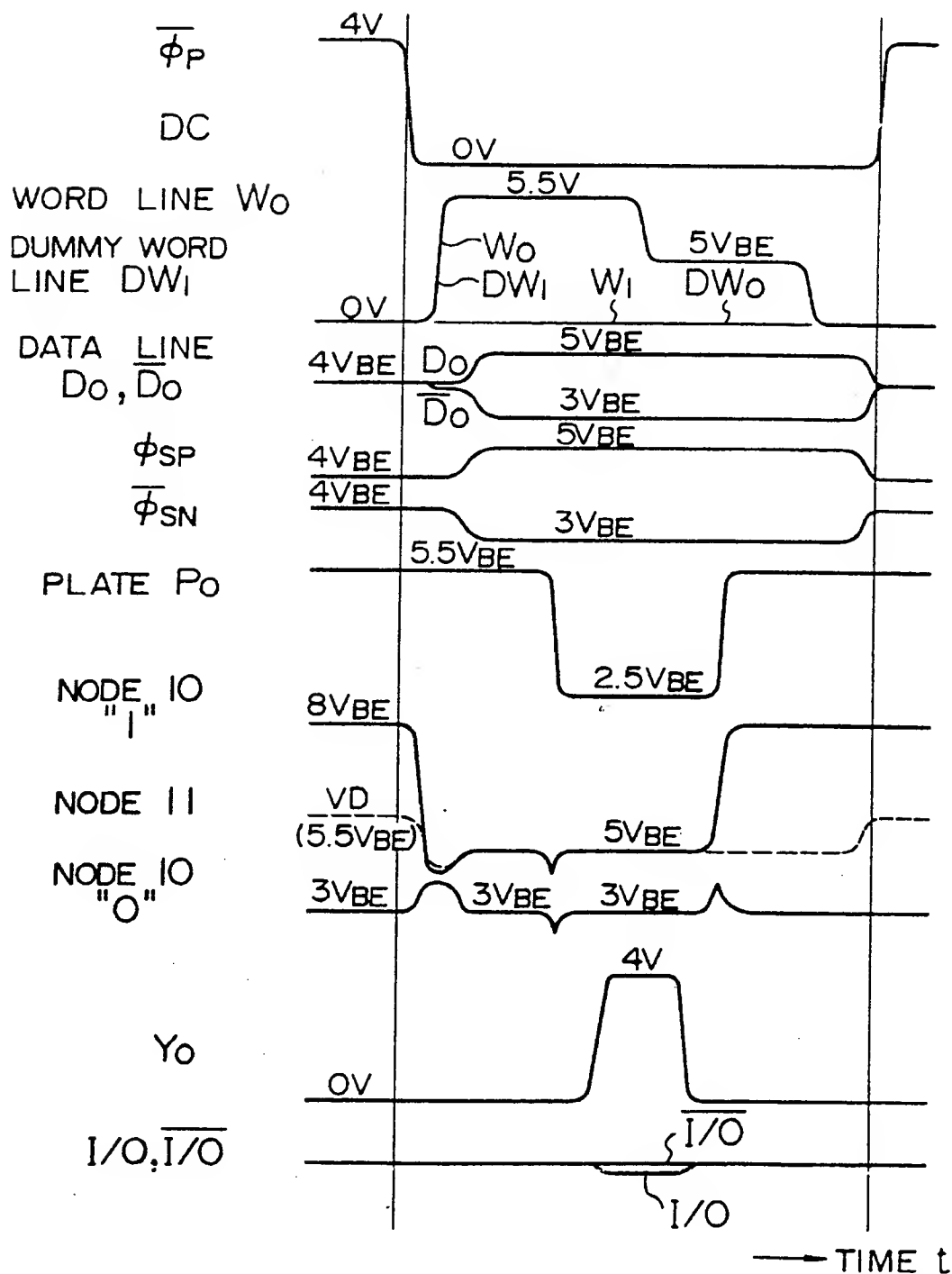


FIG. 60C

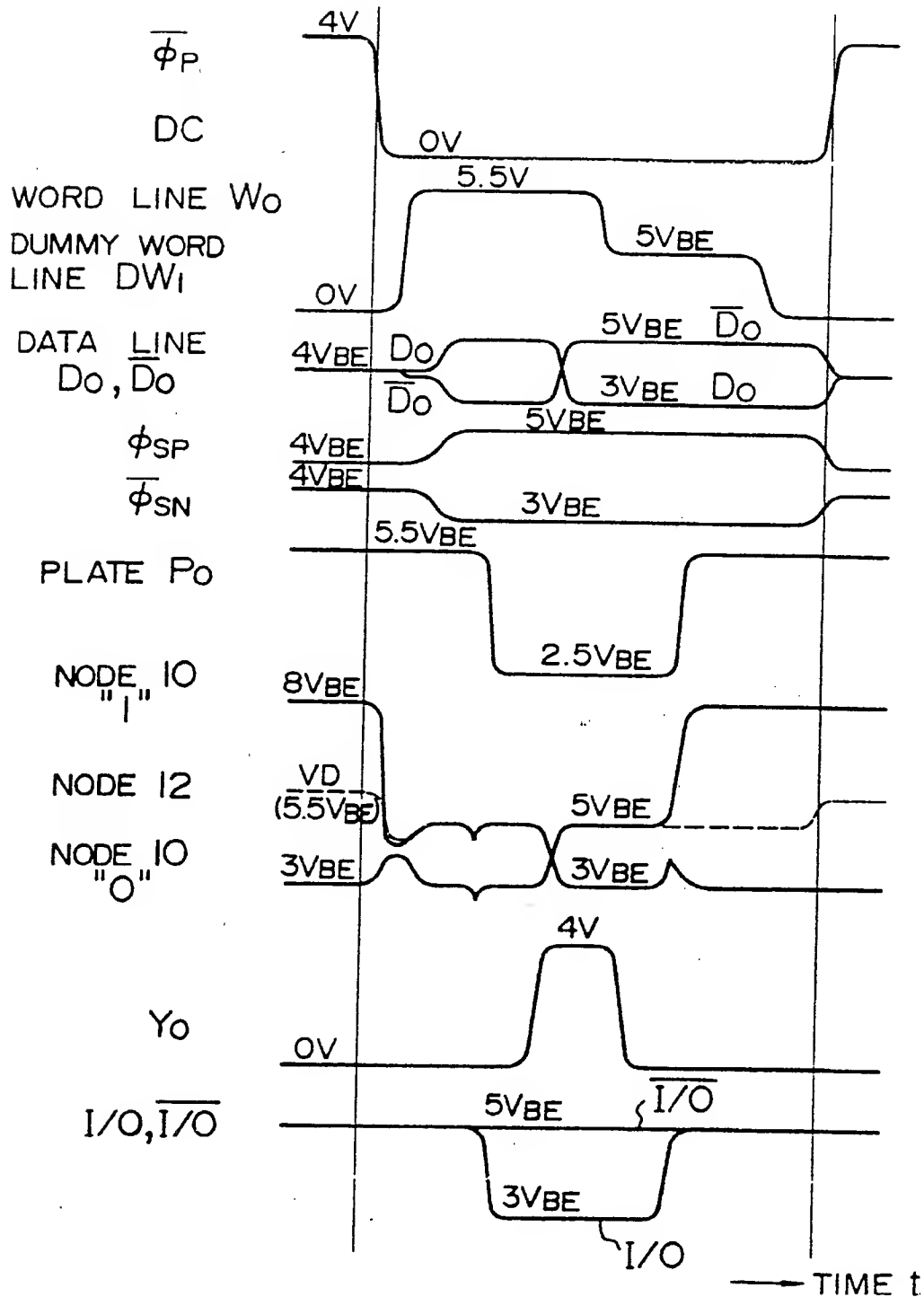
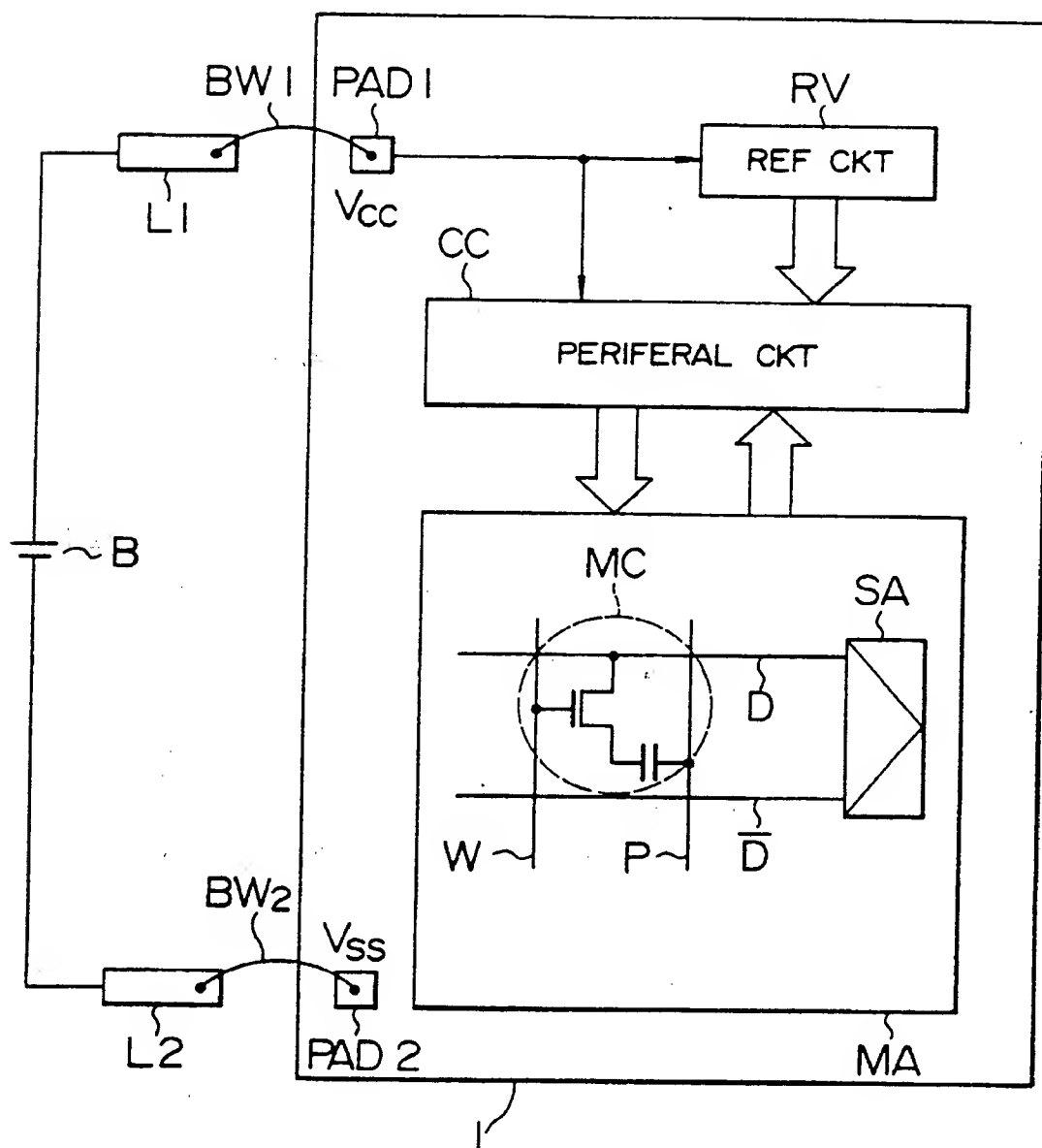


FIG. 60C

FIG. 6I





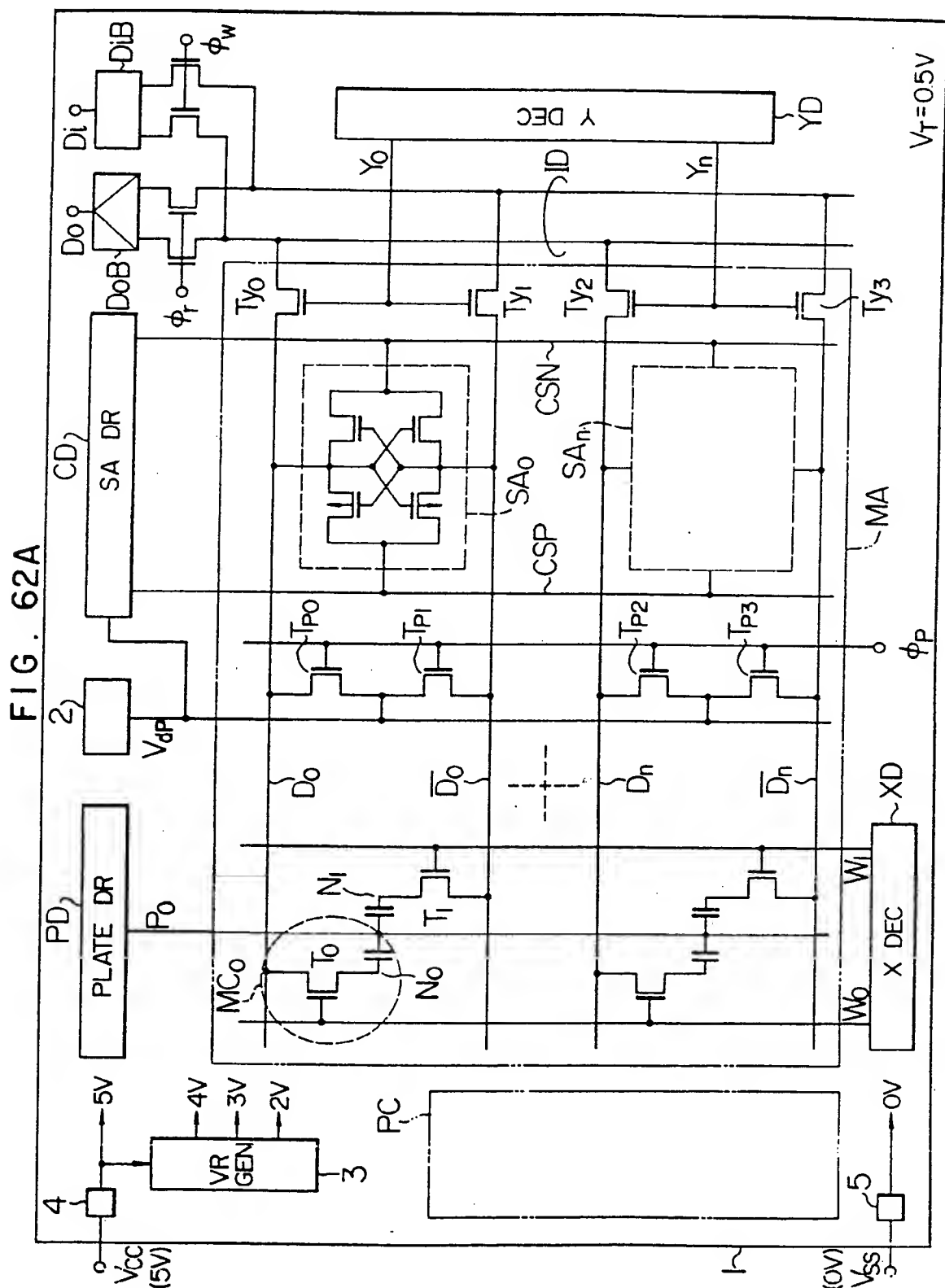


FIG. 62B

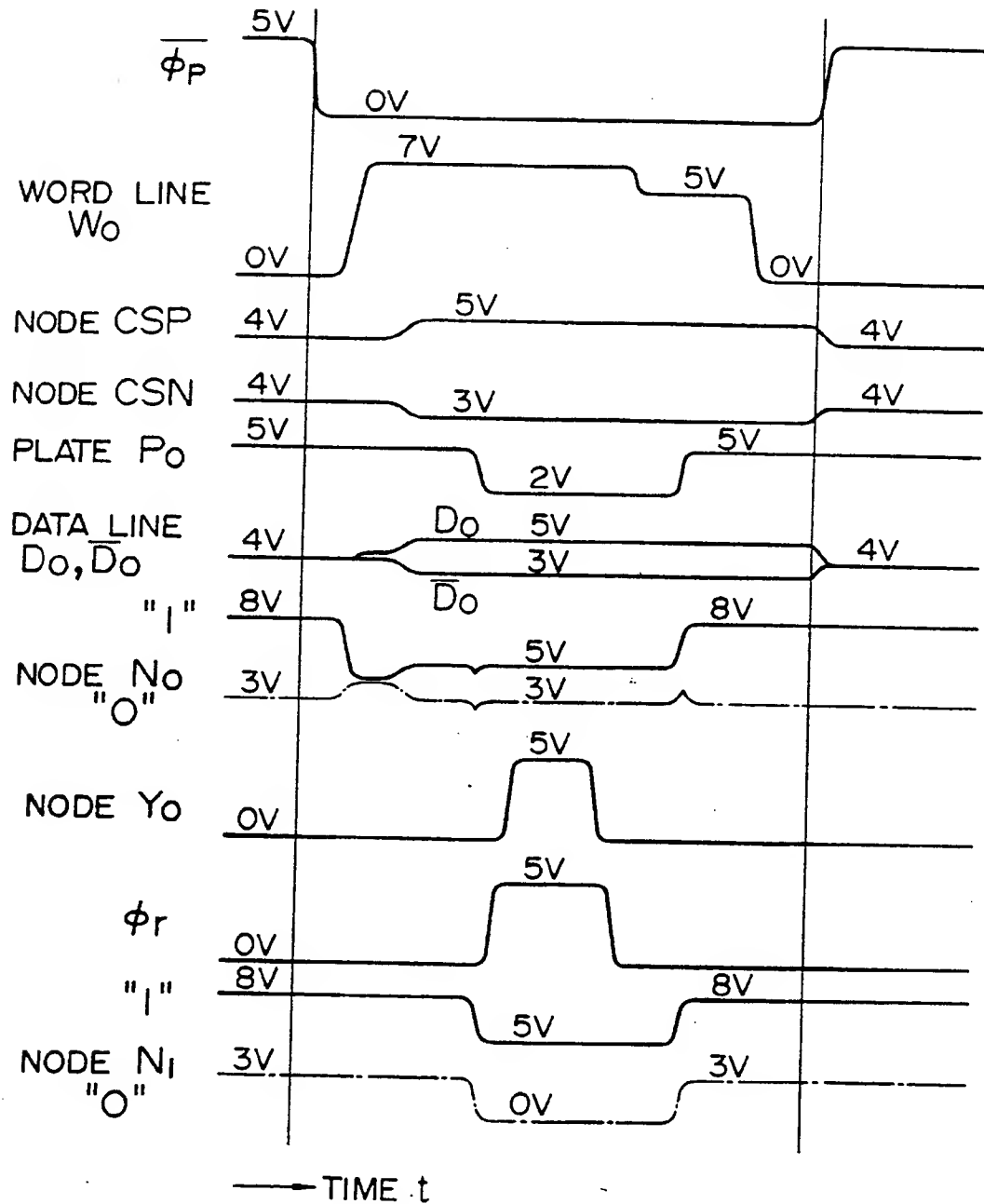


FIG. 62B

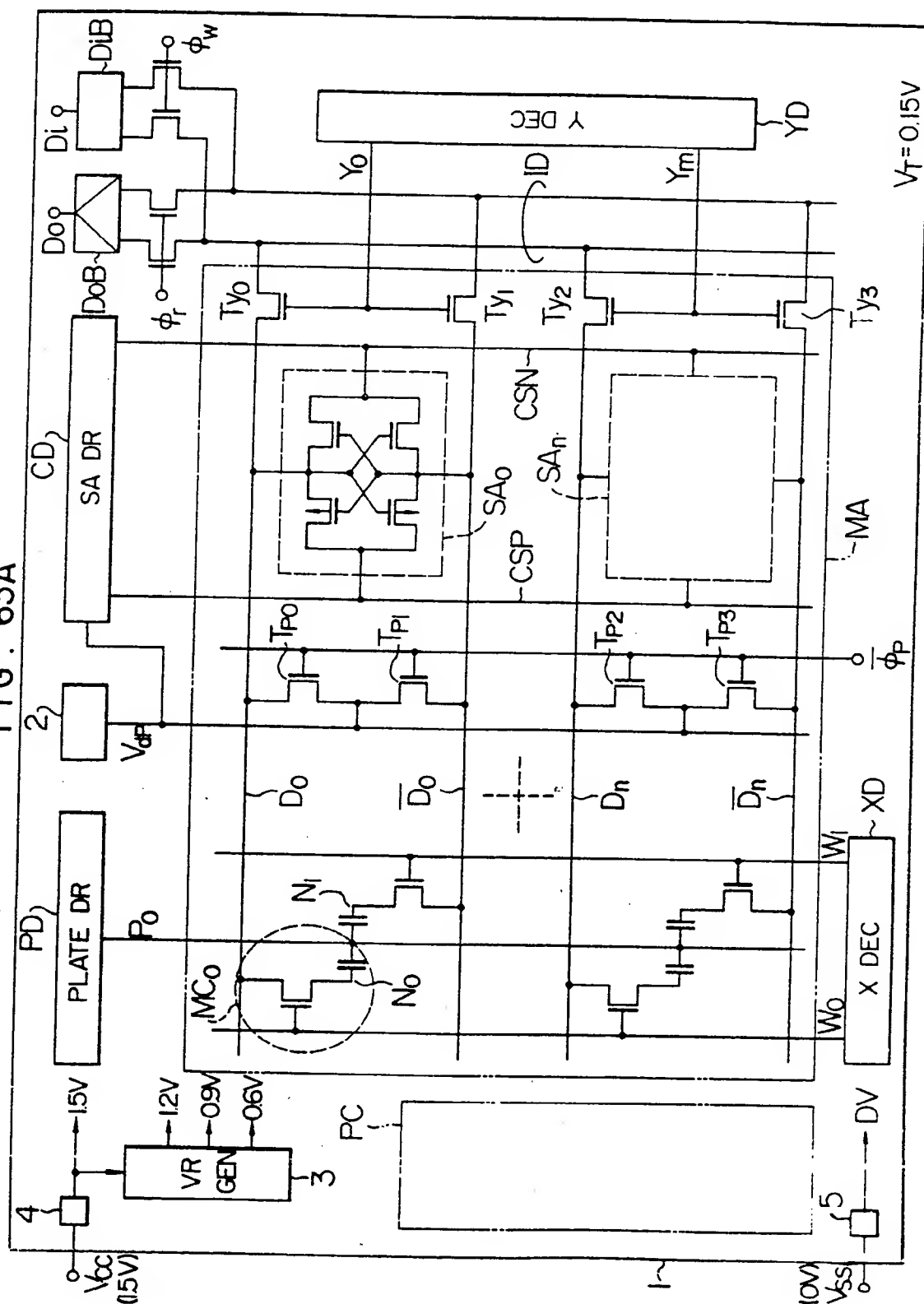
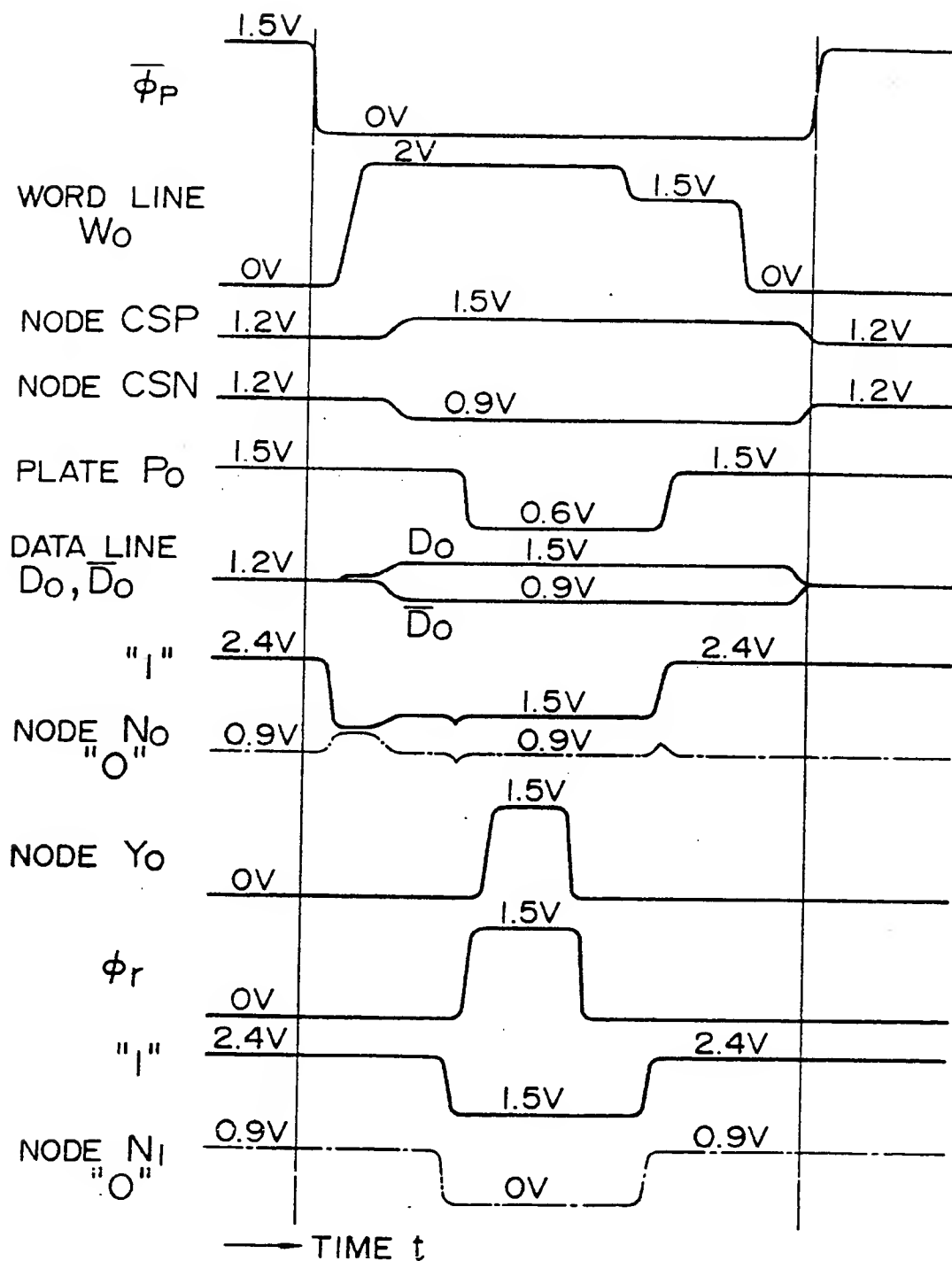


FIG. 63B



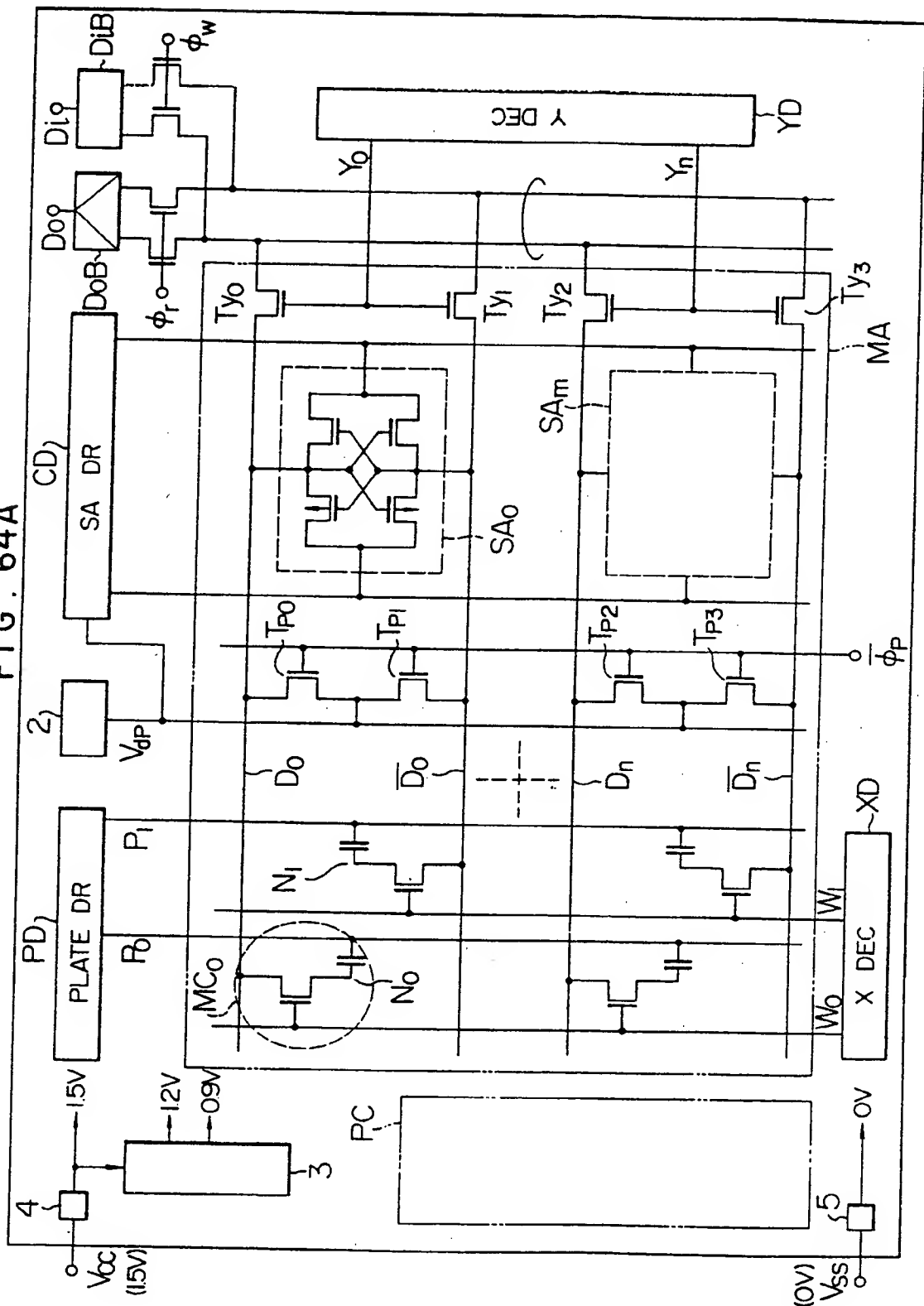


FIG. 64B

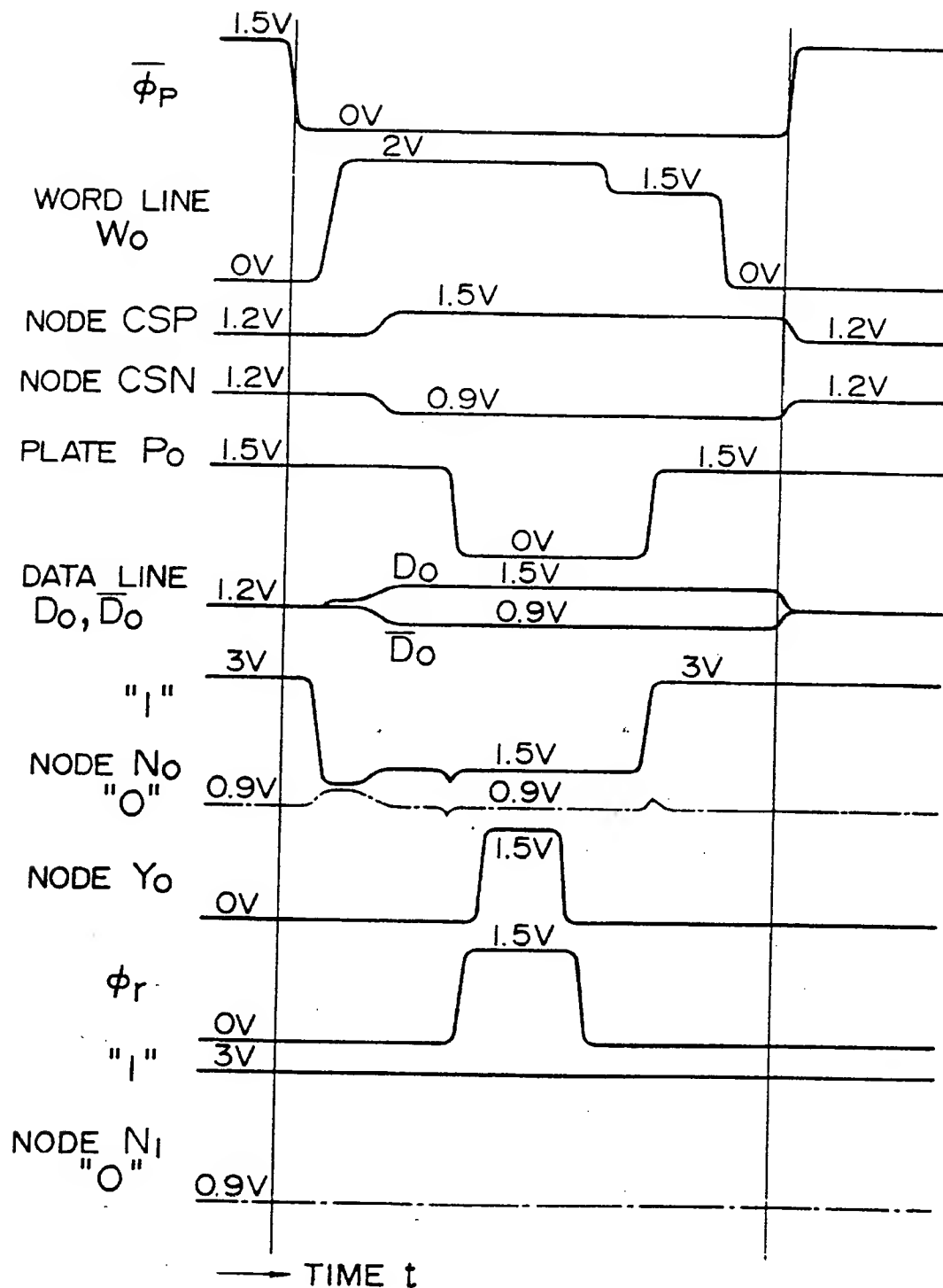


FIG. 64B 2649860

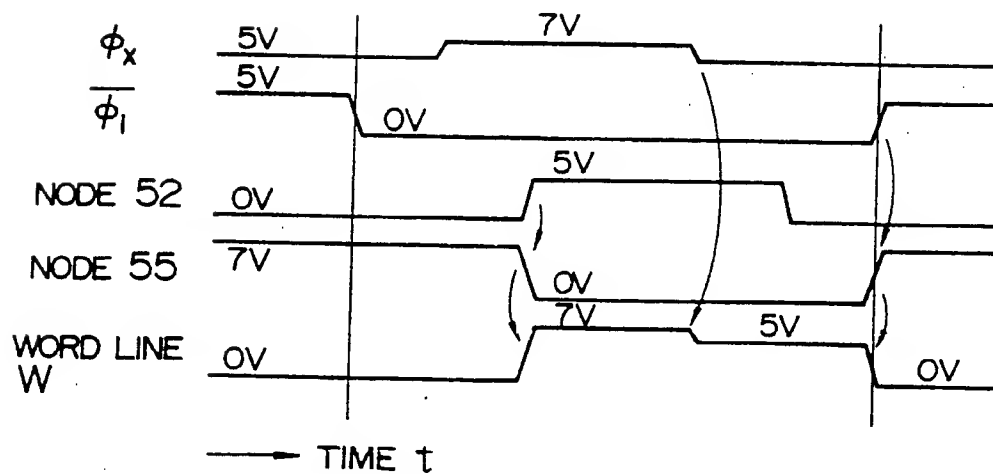
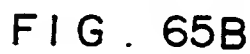
[illegible]

FIG. 66A

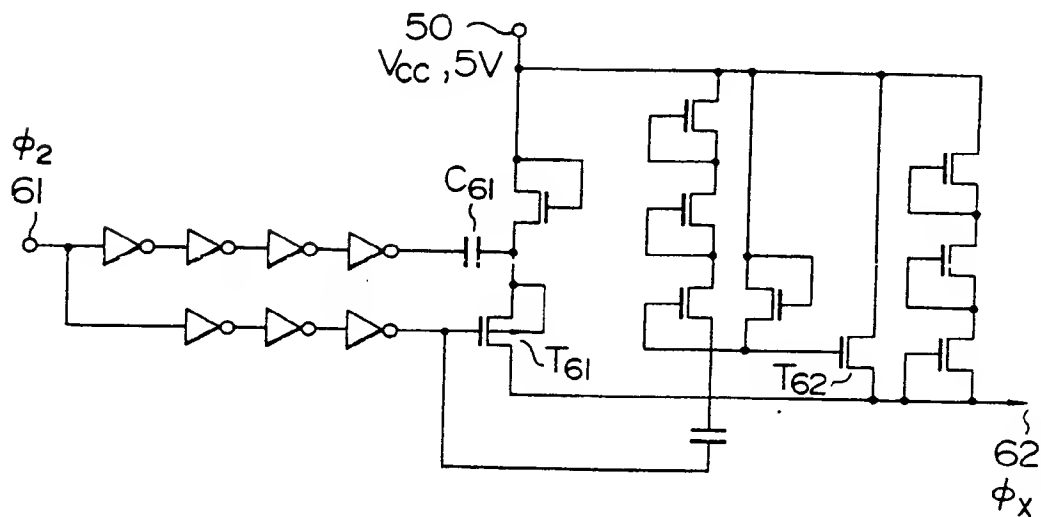


FIG. 66B

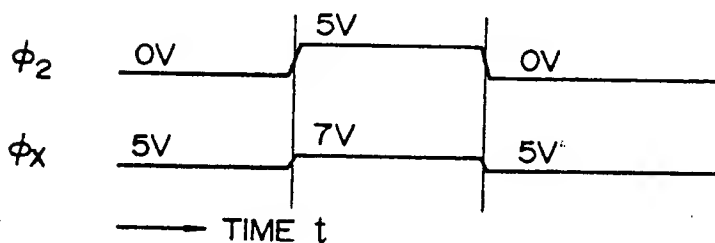
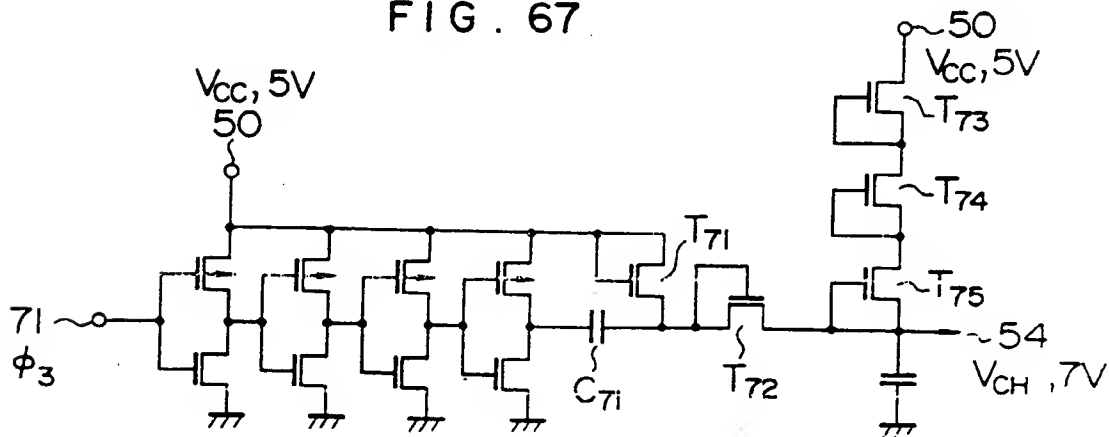


FIG. 67





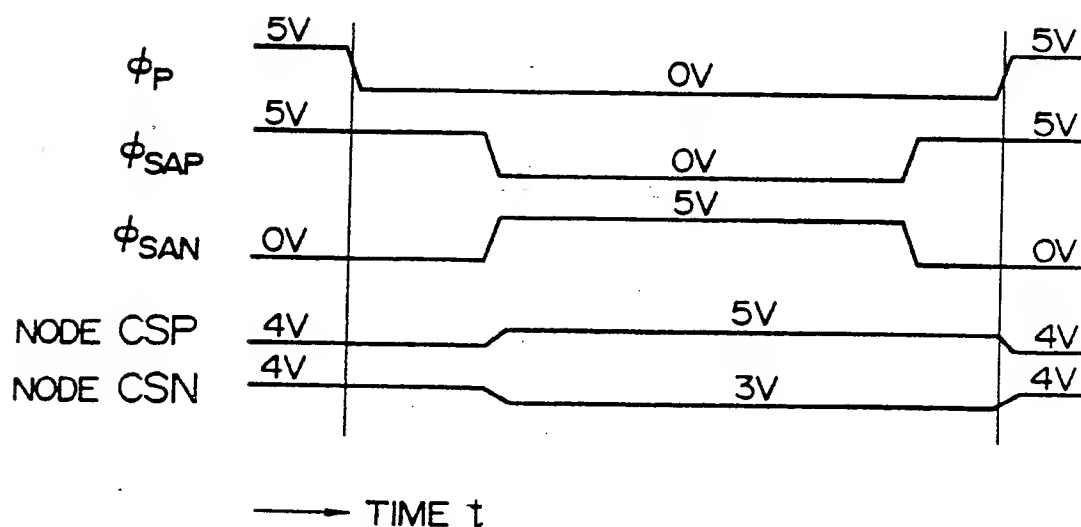


FIG. 69A

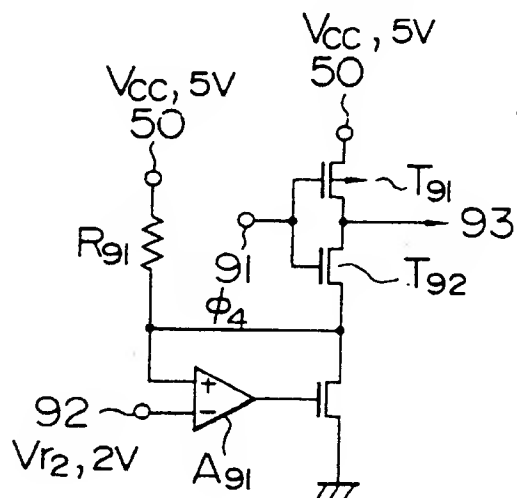


FIG. 69B

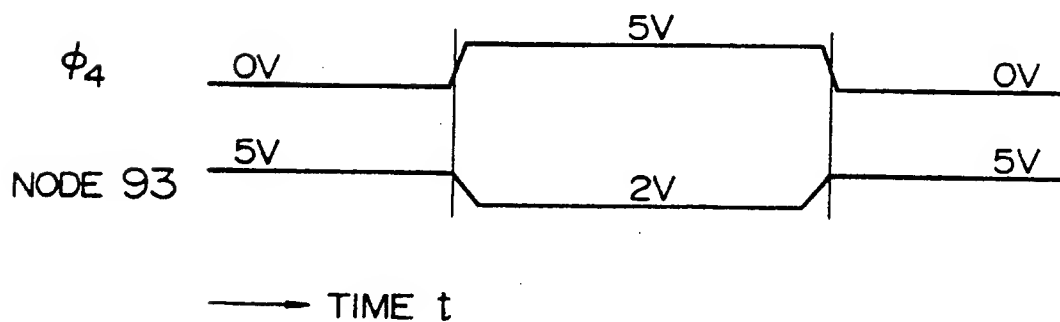


FIG. 70A

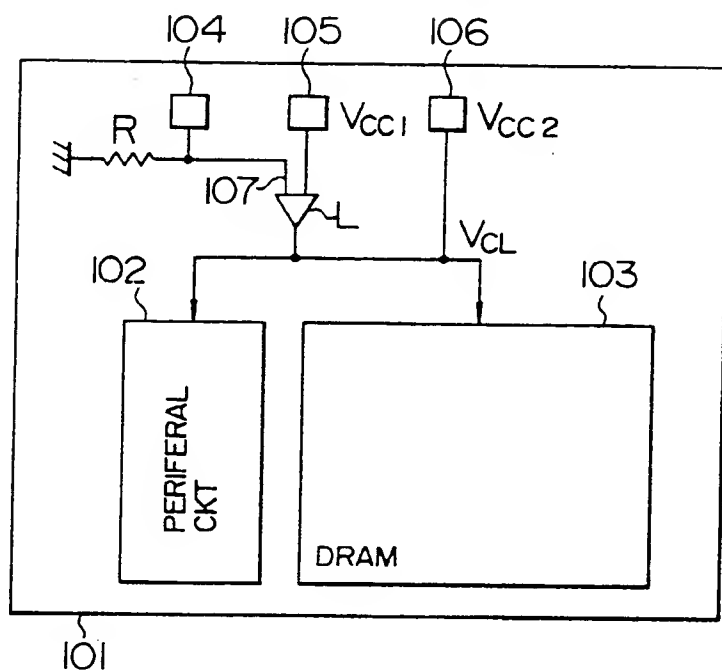


FIG. 70B

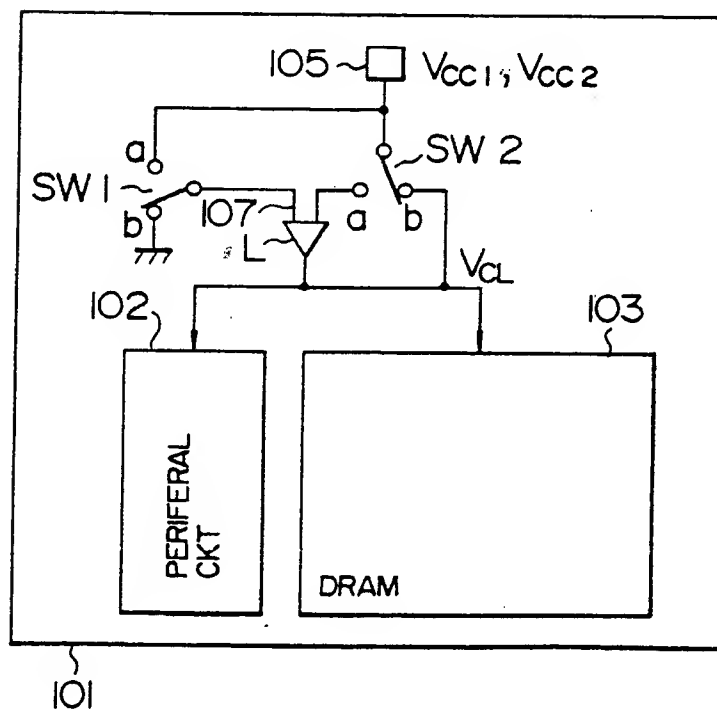


FIG. 70C

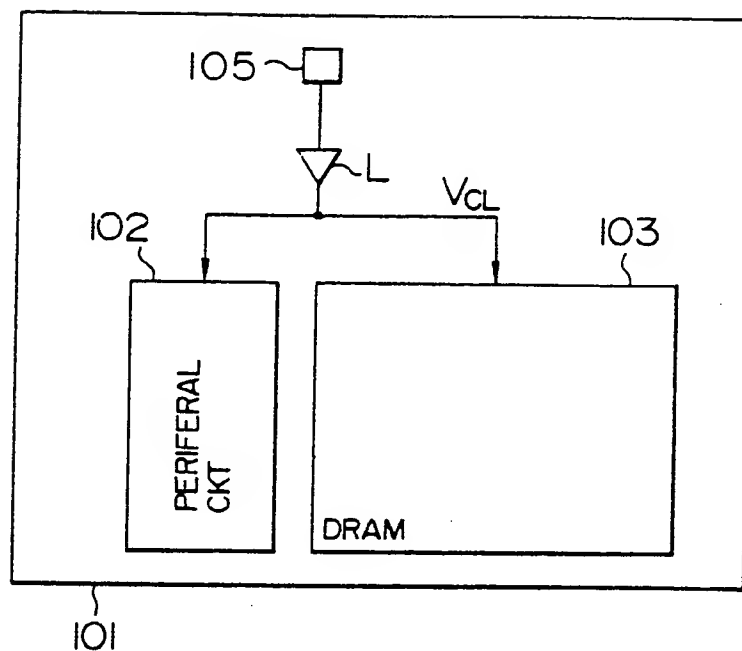


FIG. 70D

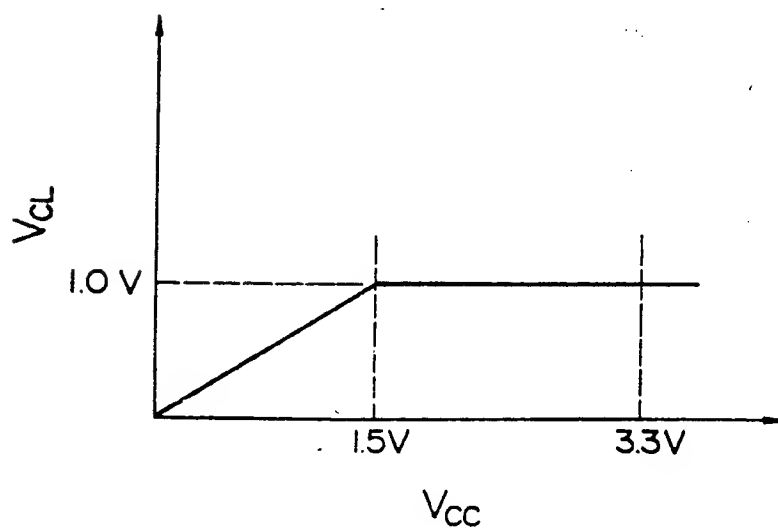


FIG. 71A

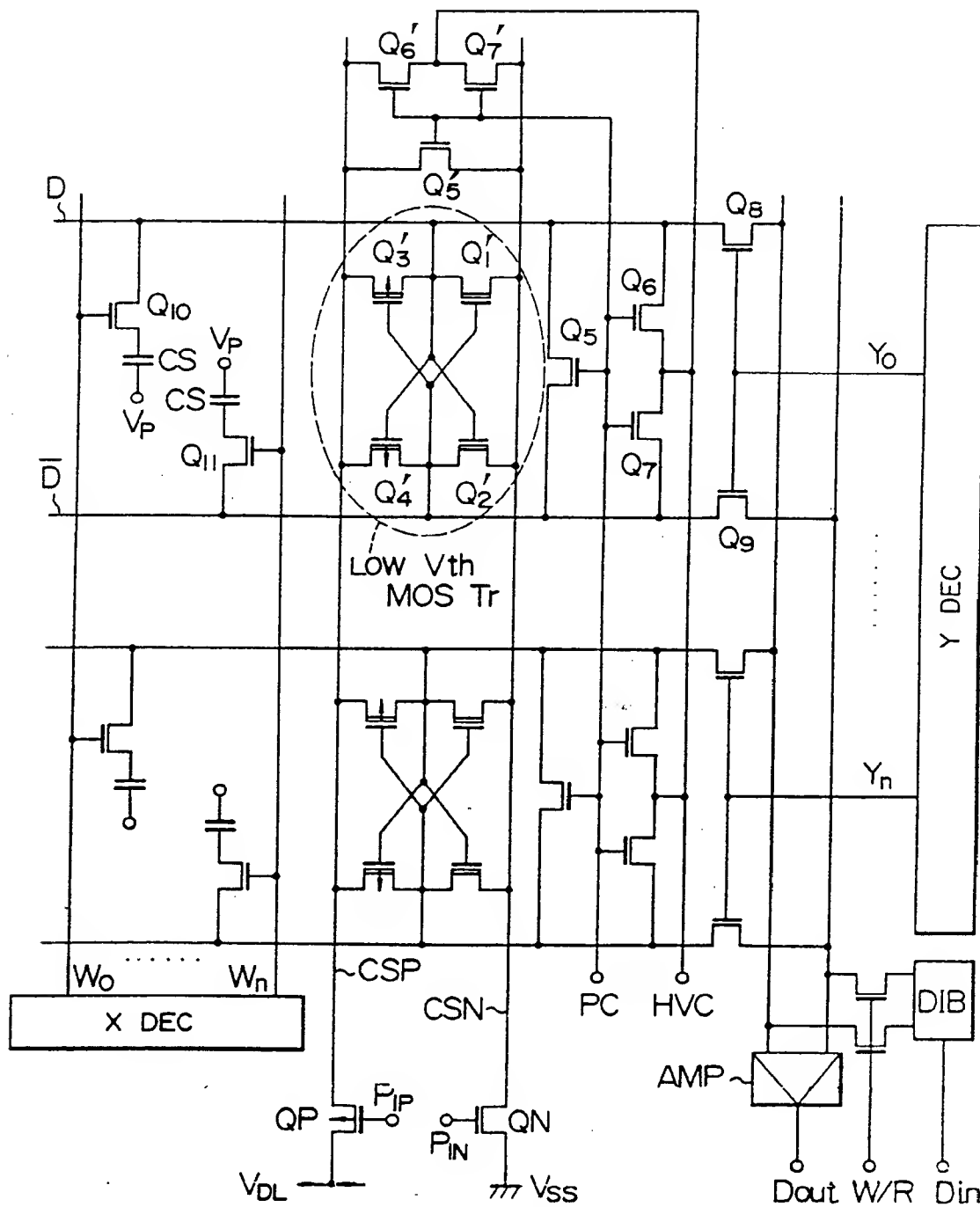


FIG. 71B

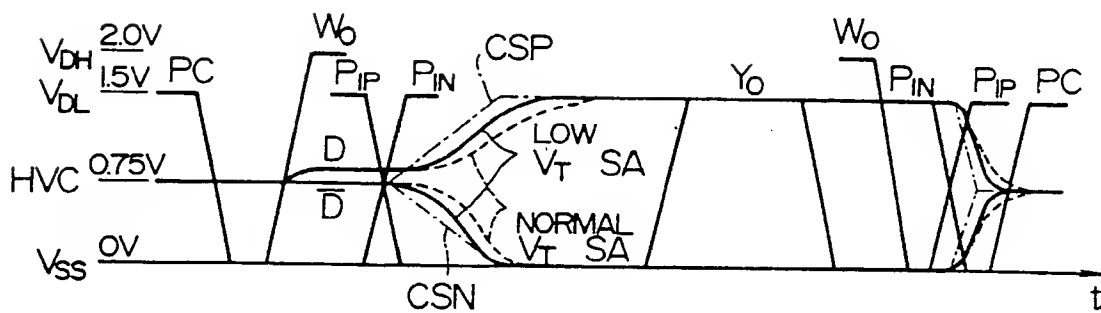


FIG. 71C

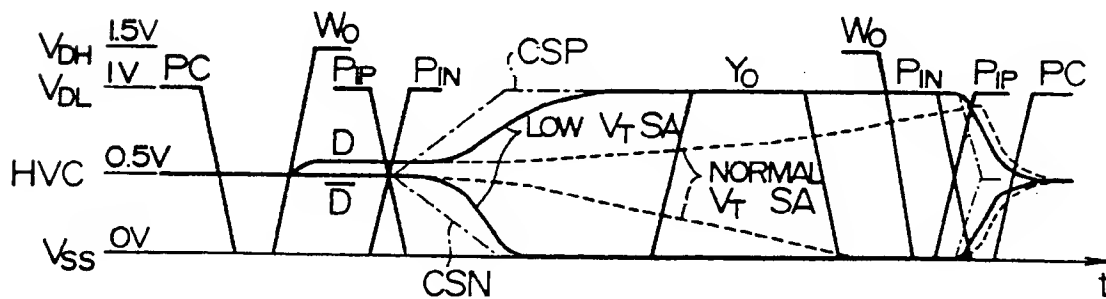


FIG. 7ID

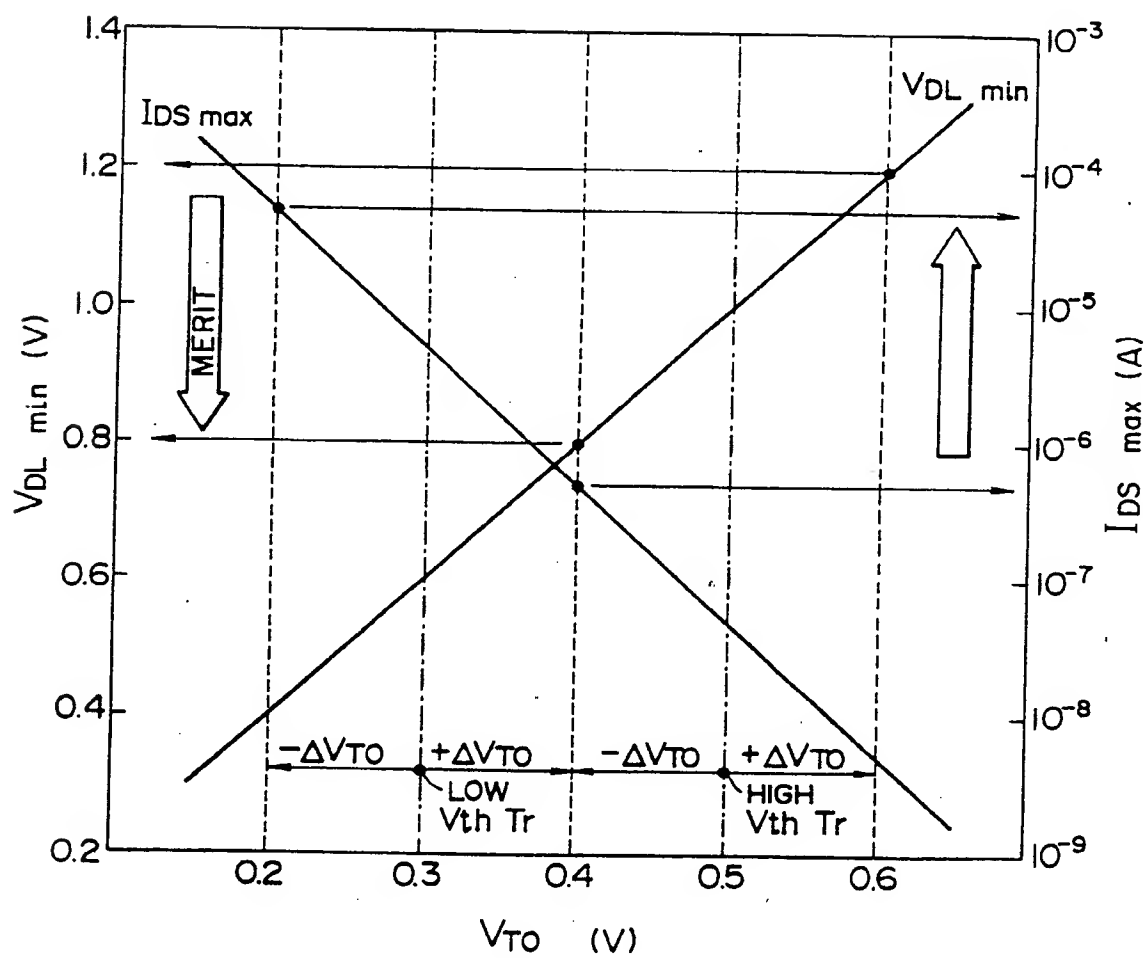


FIG. 7IE

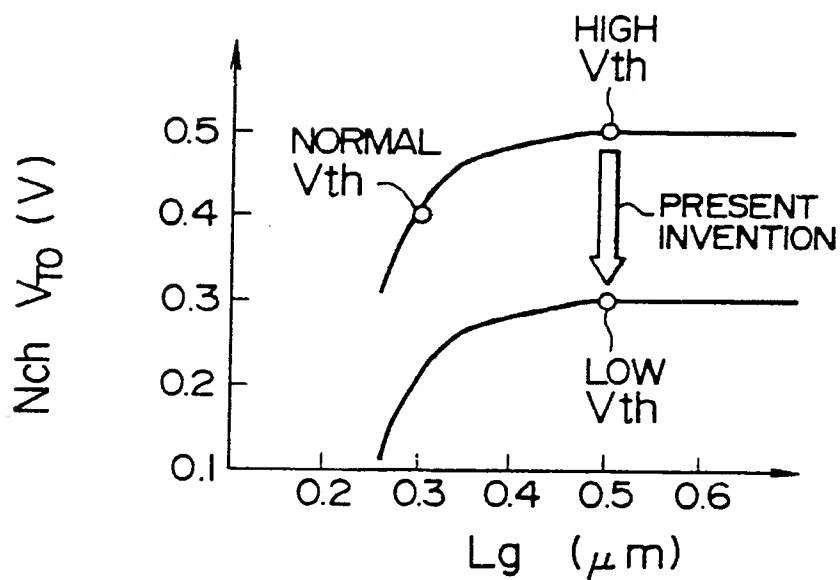


FIG. 7IF

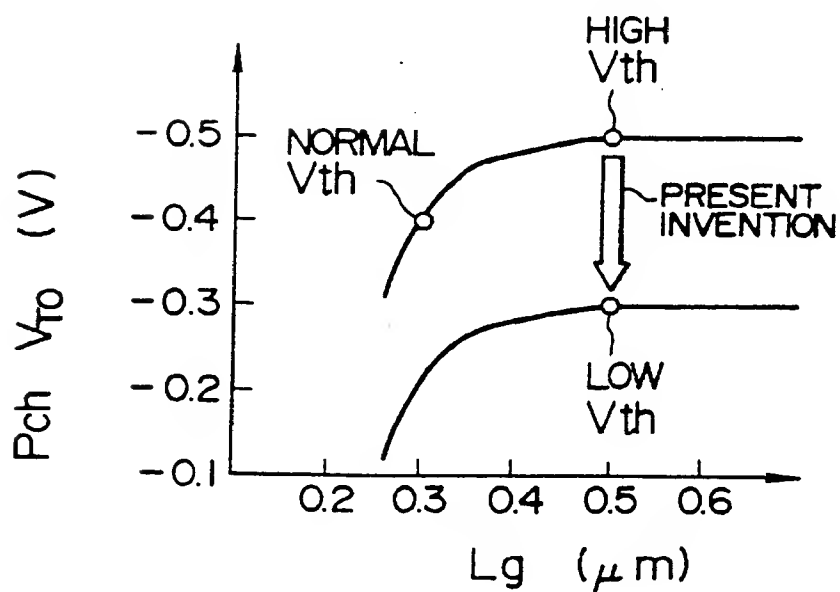




FIG. 72A

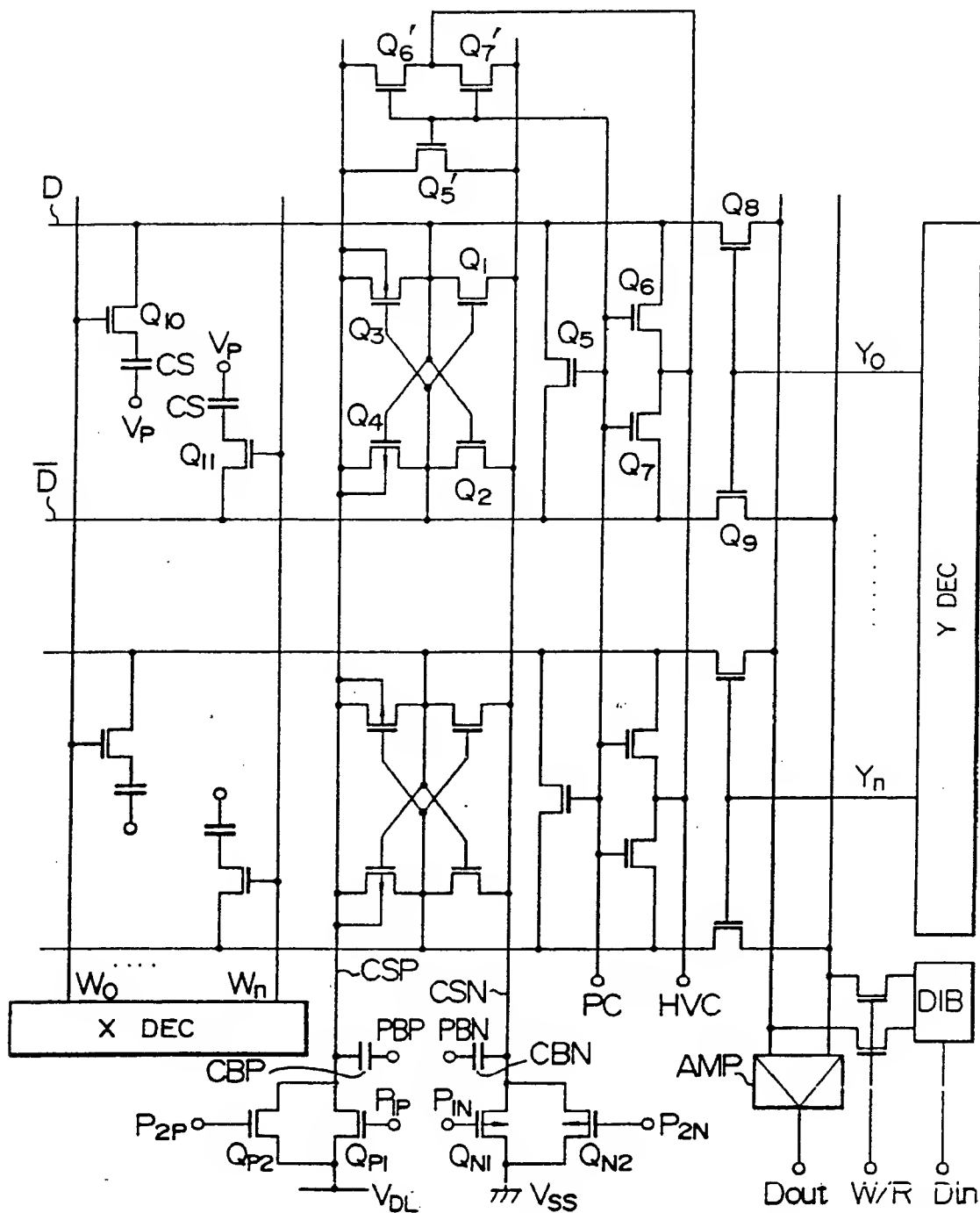


FIG. 72B

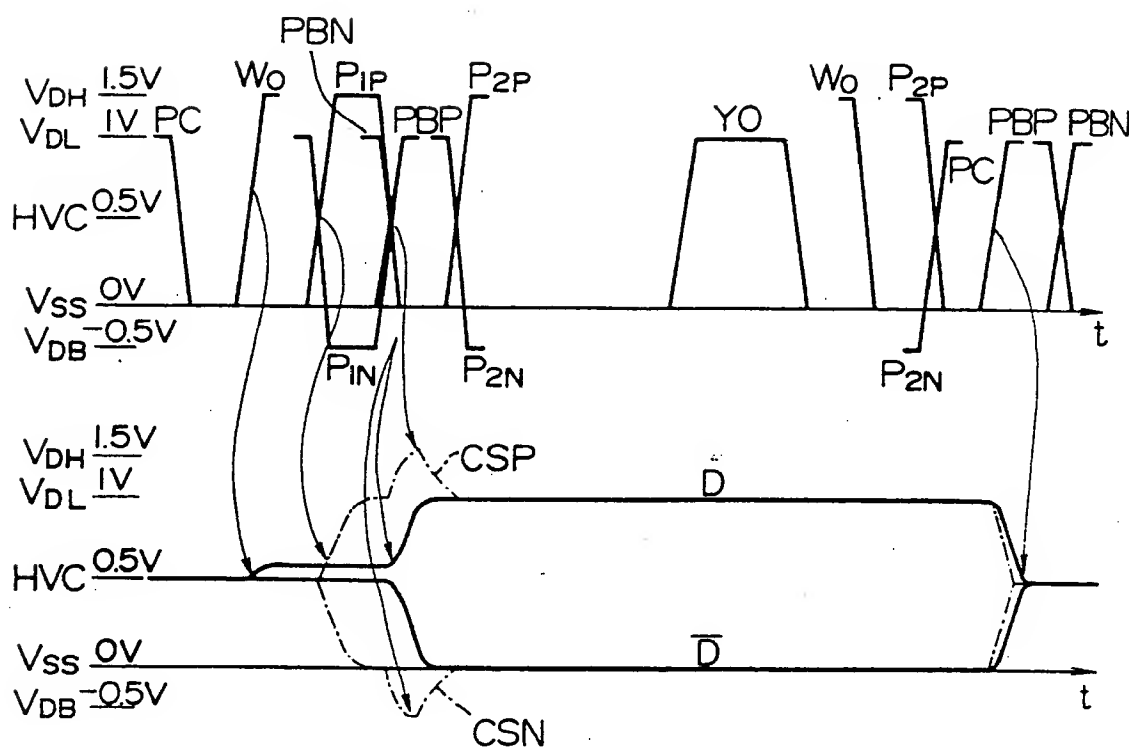


FIG. 73A

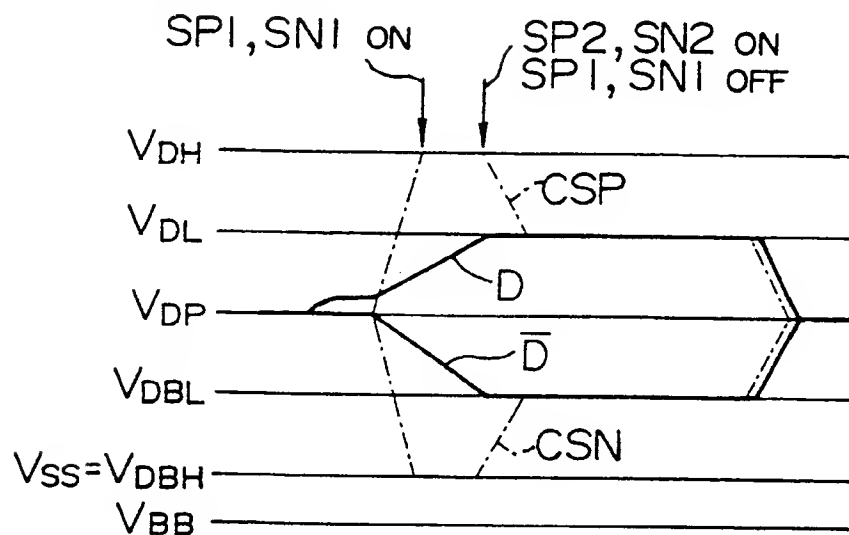


FIG. 73B

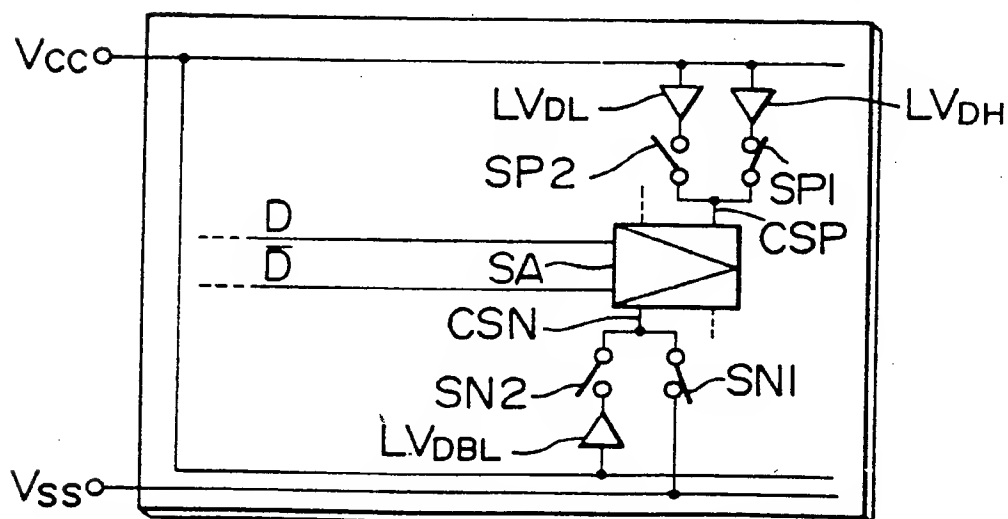


FIG. 73C

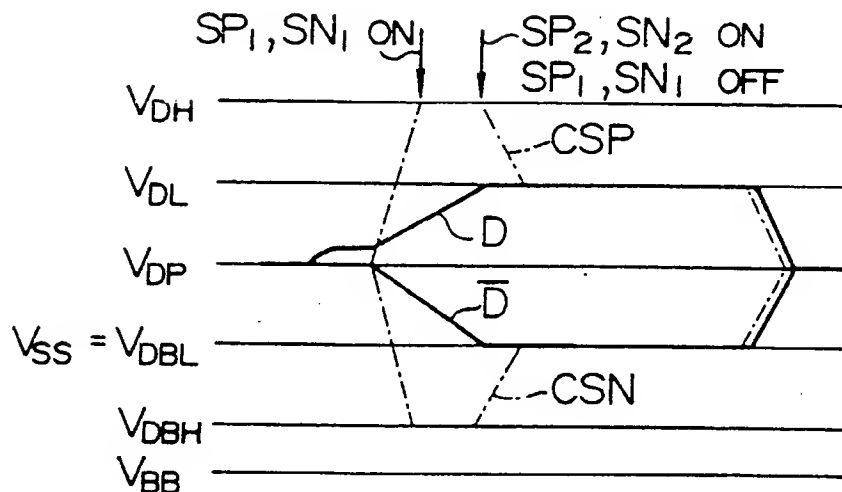


FIG. 73D

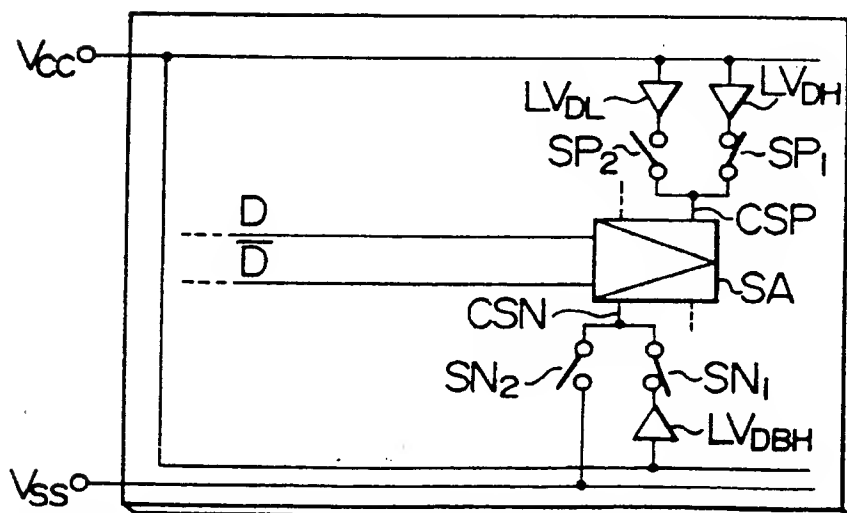


FIG. 73E

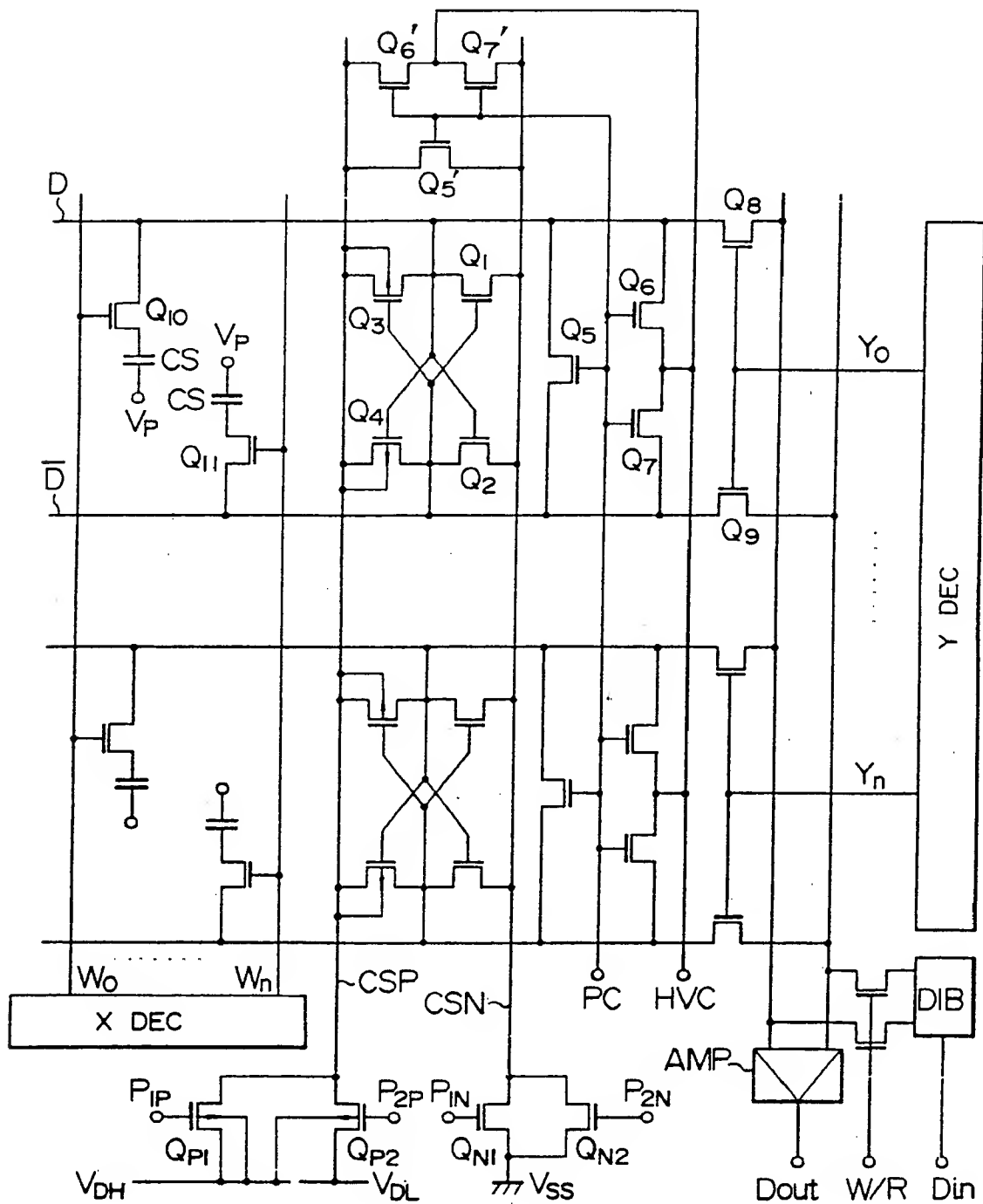


FIG. 73F

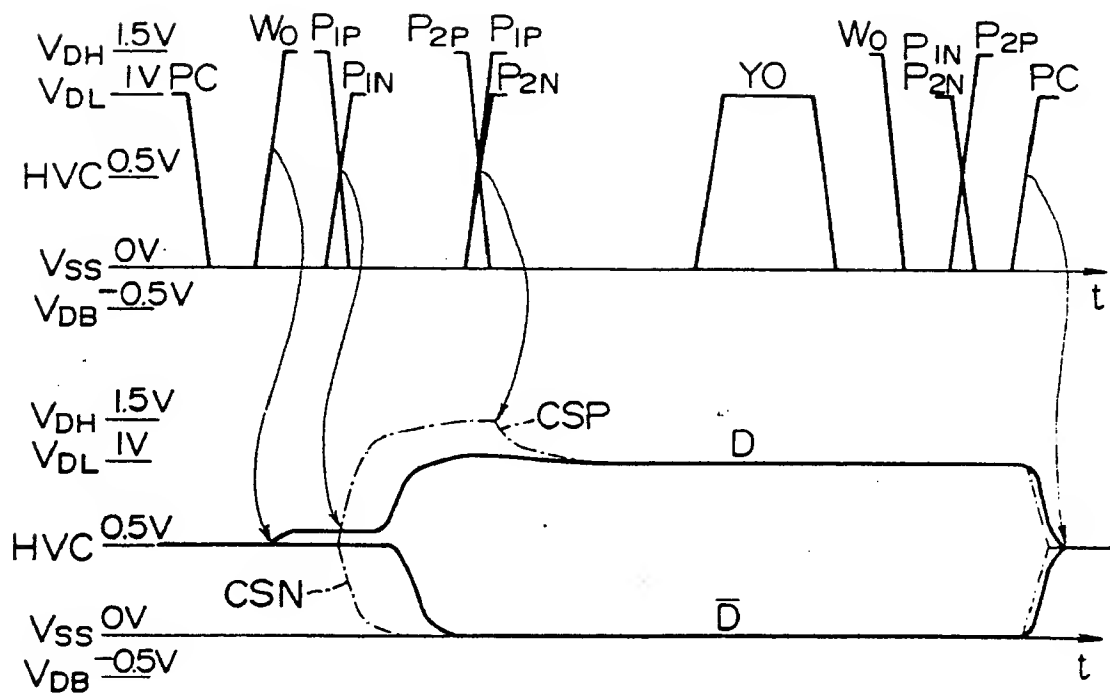


FIG. 74A

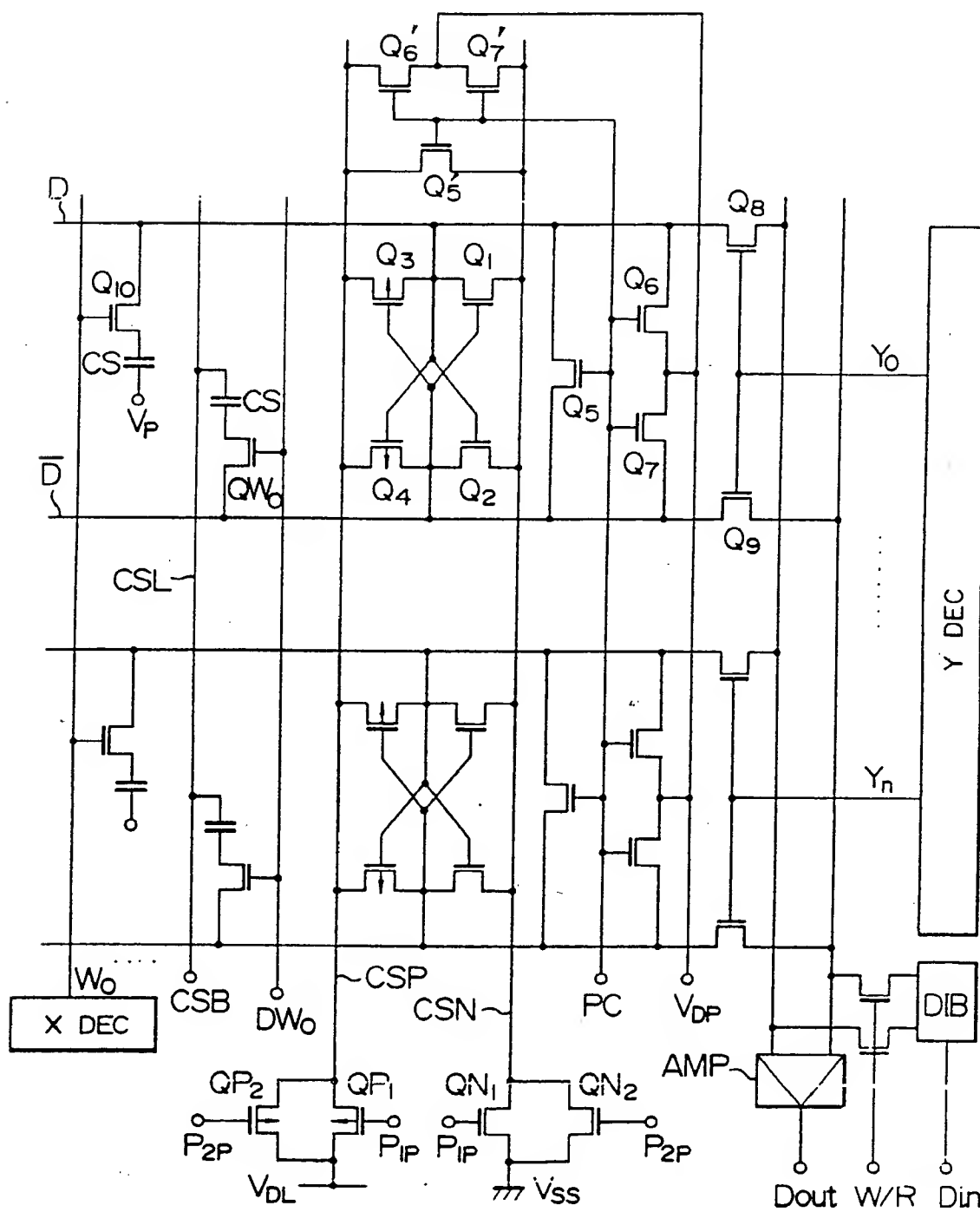


FIG. 74B

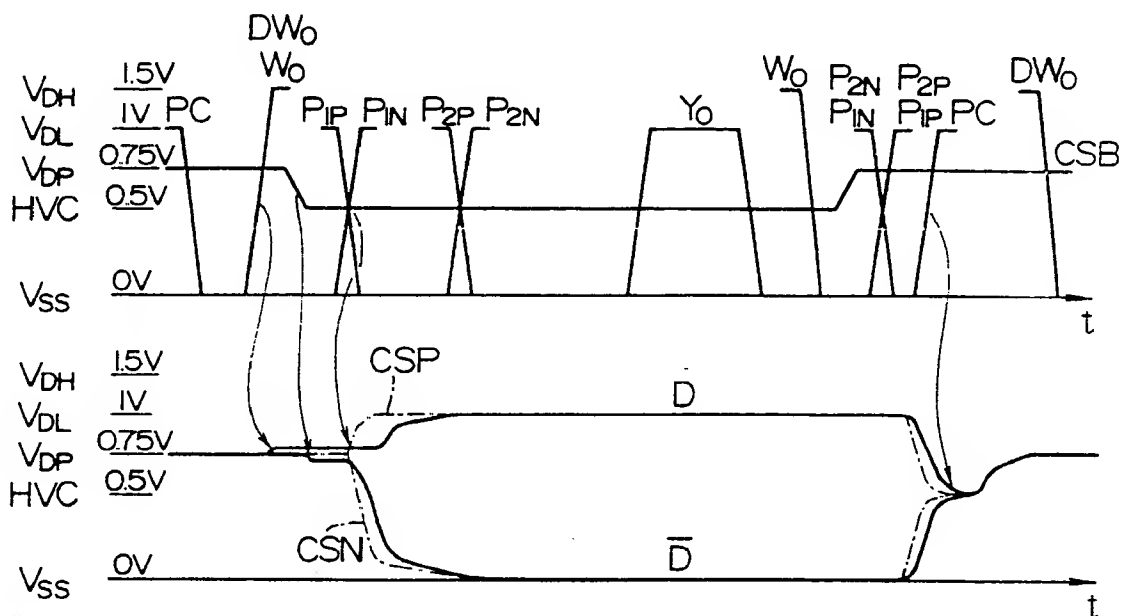


FIG. 74C

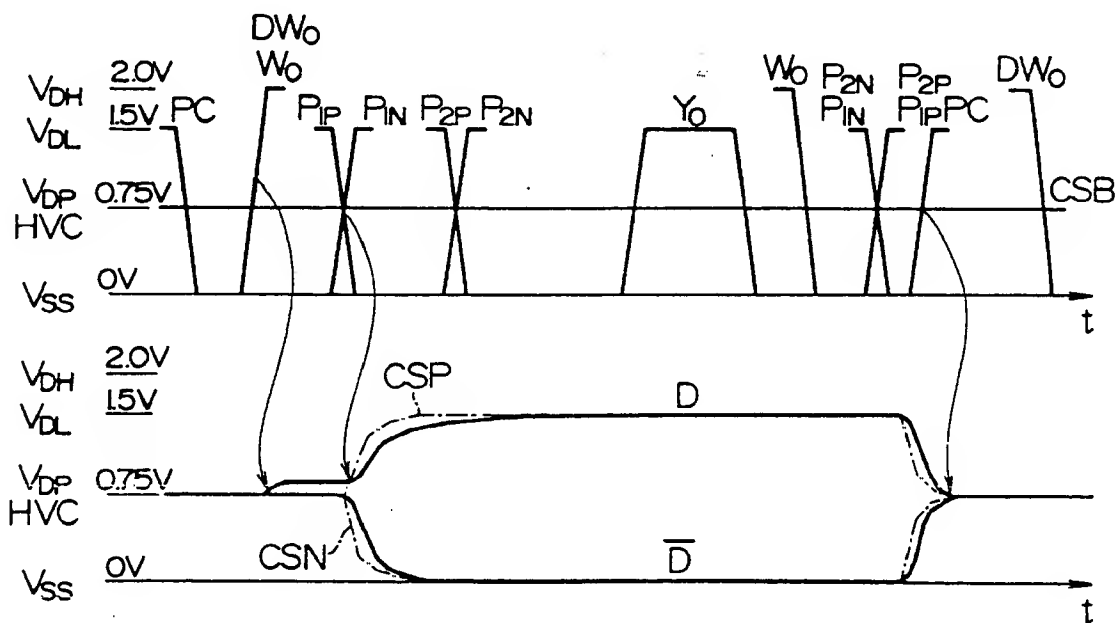




FIG. 74D

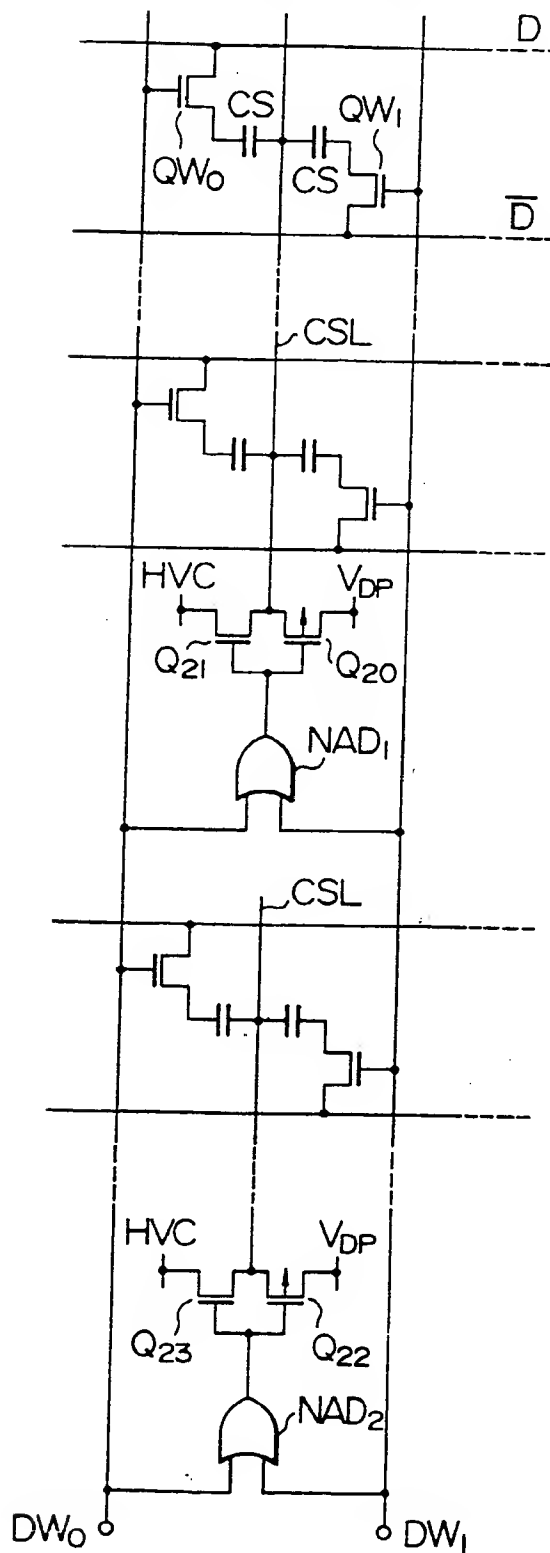


FIG. 74D

FIG. 74E

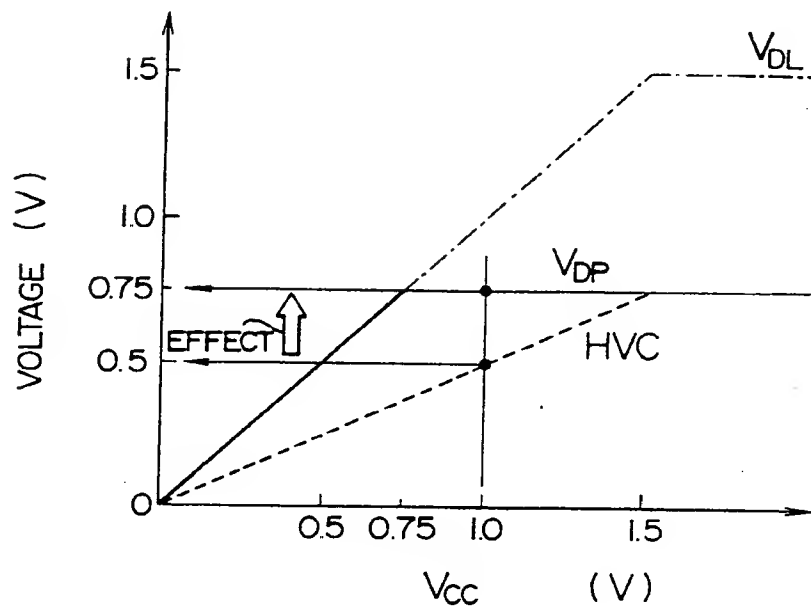


FIG. 74F

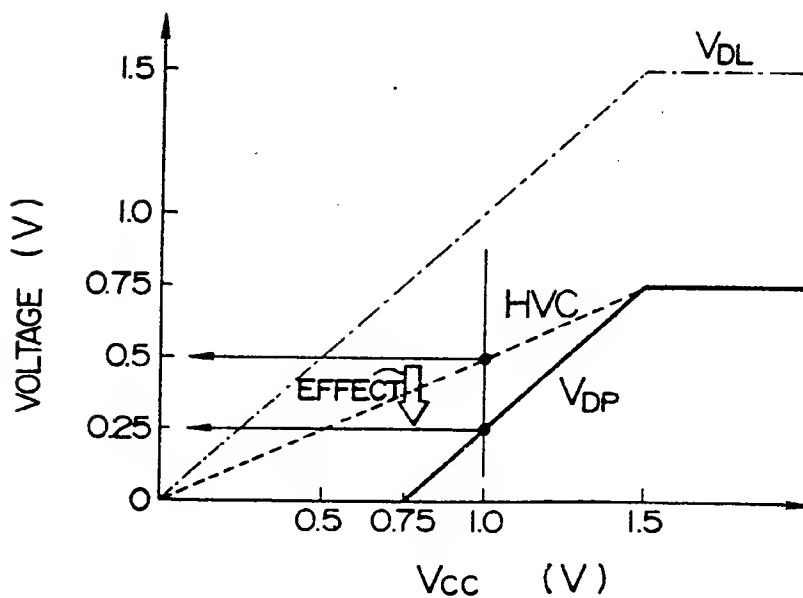


FIG. 75A

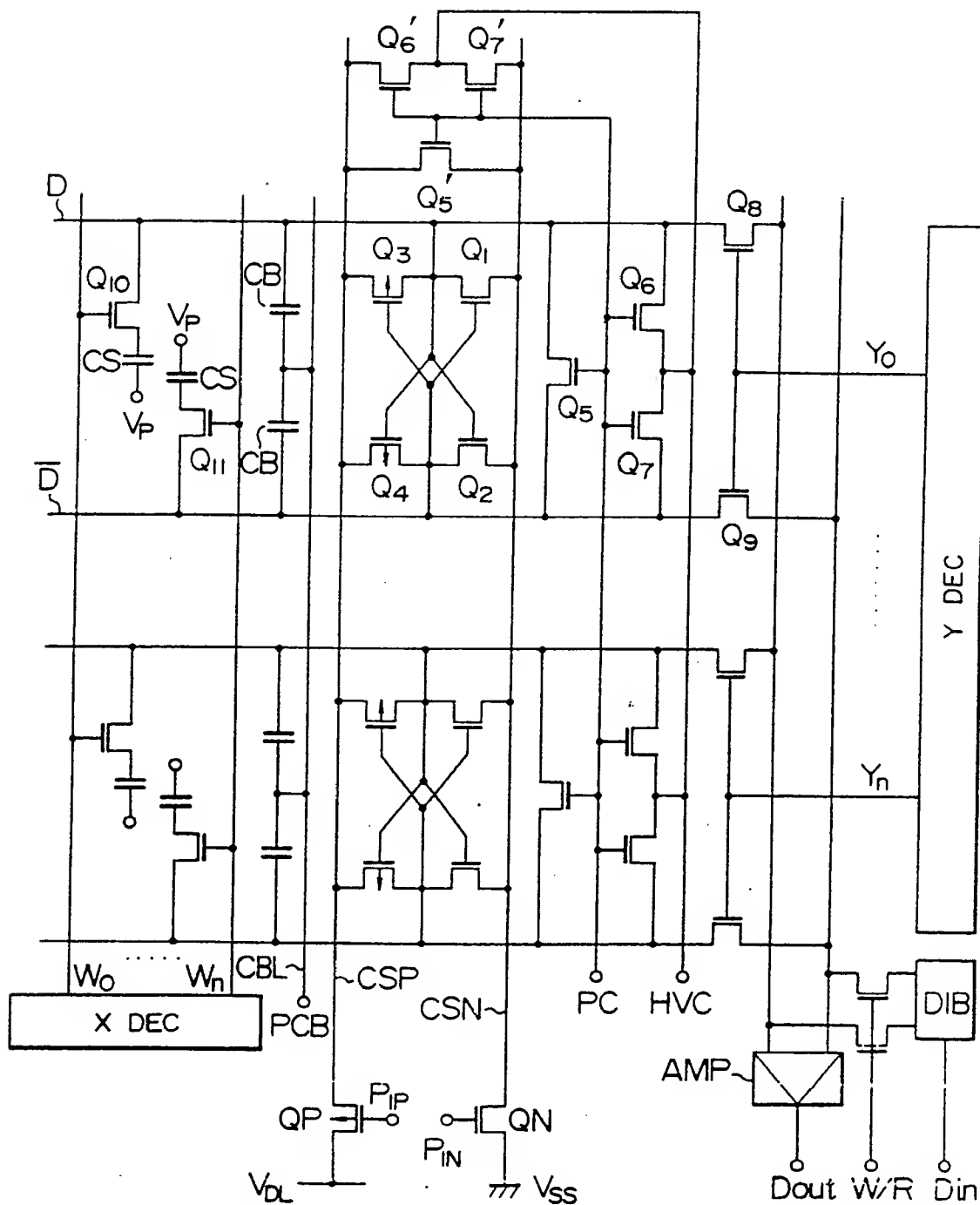


FIG. 75B

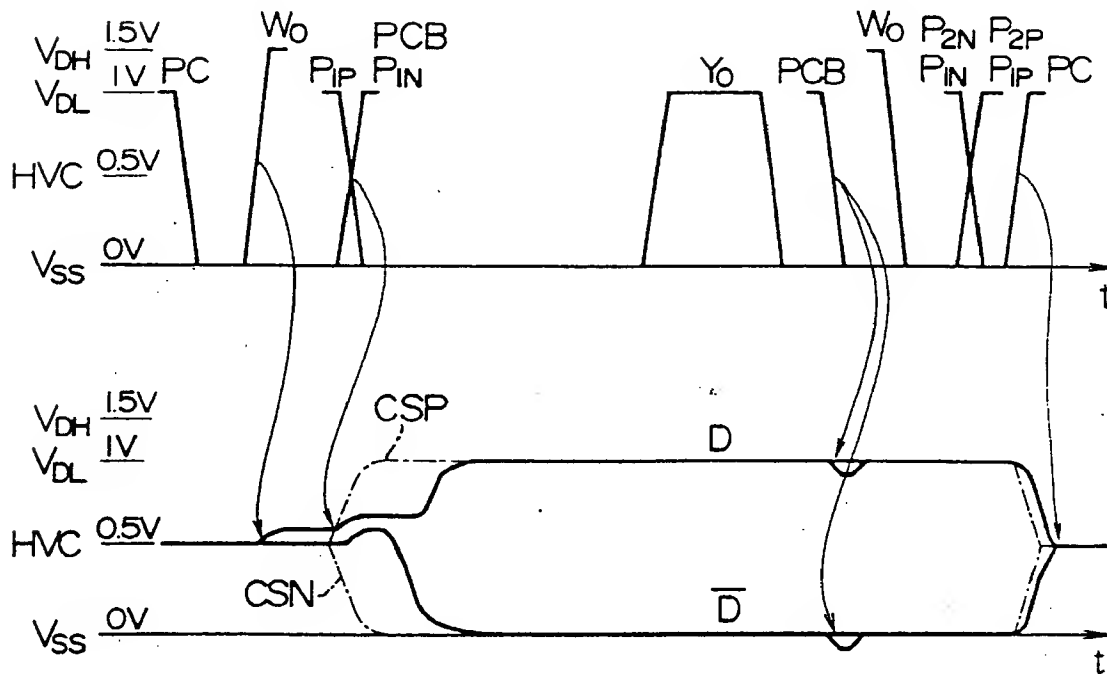


FIG. 76A

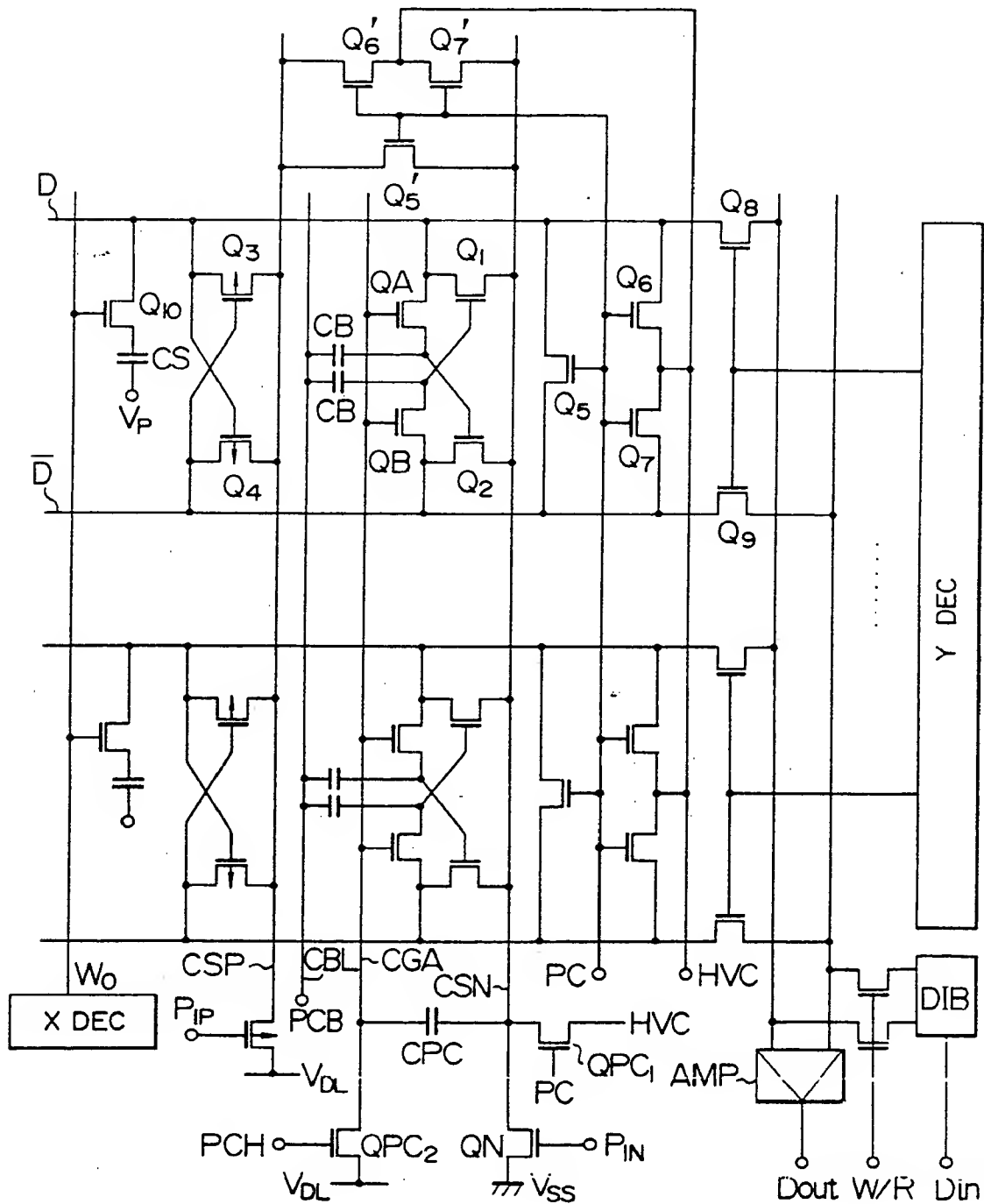


FIG. 76B

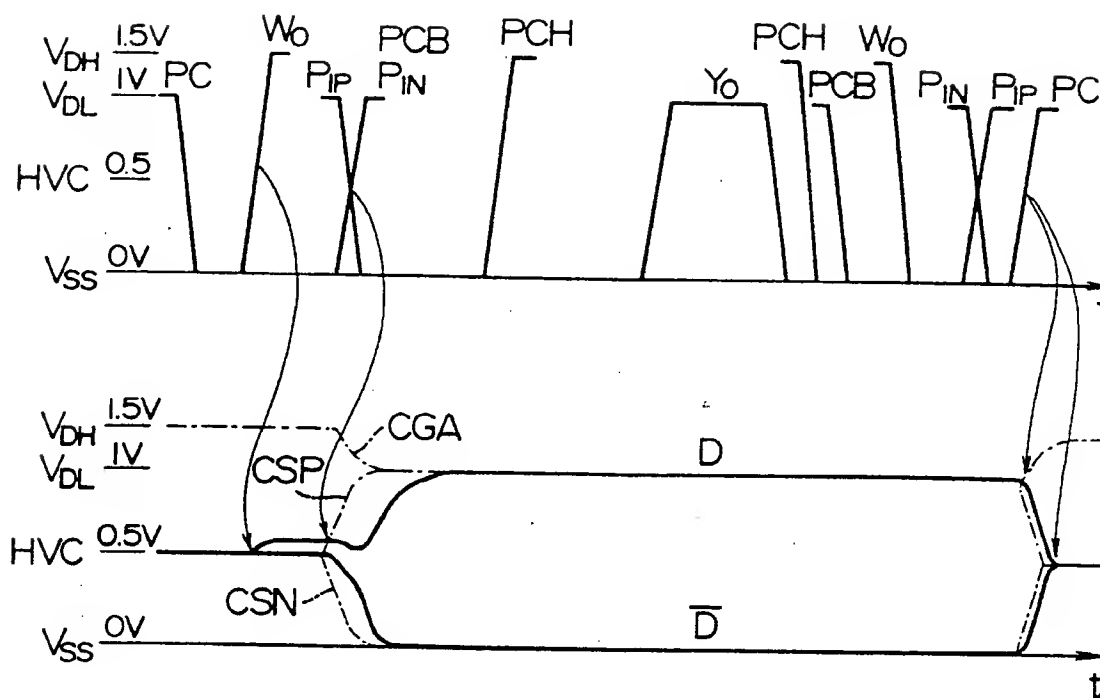


FIG. 77A

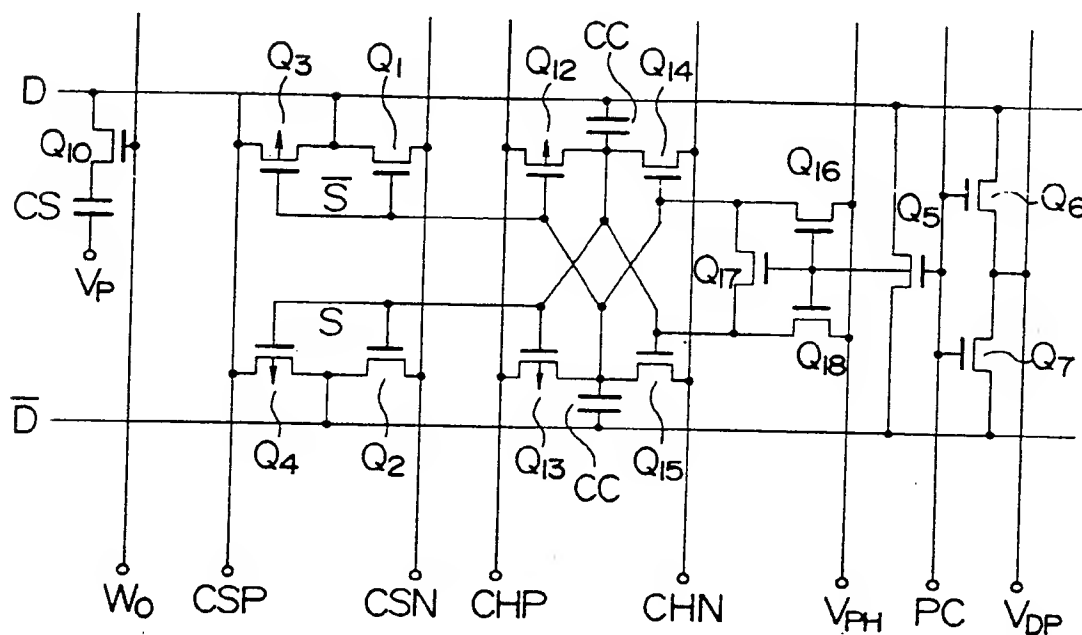


FIG. 77B

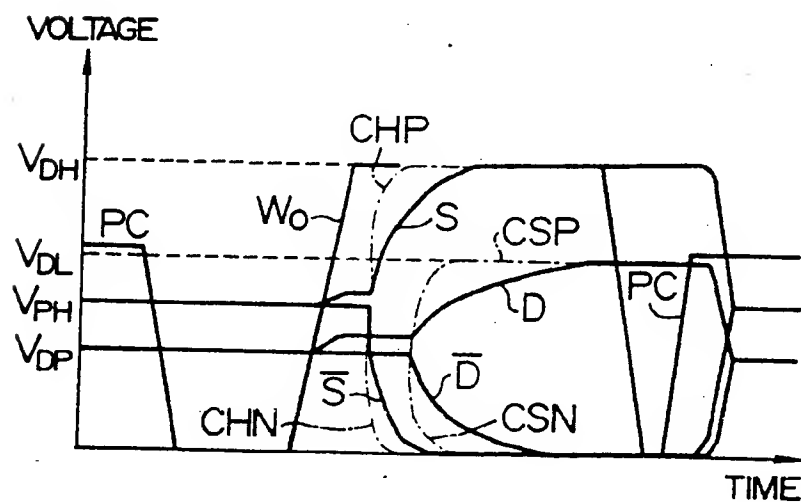


FIG. 78A

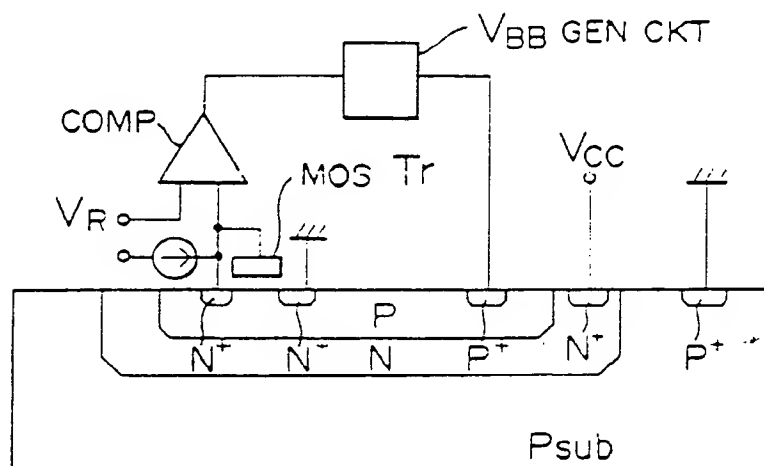


FIG. 78B

